

RECORD OF REVISIONPROCEDURE

If there are changes to the procedure, the revision number increases by one. These changes are indicated by placing a heavy vertical black line located in the right-hand margin adjacent to the sentence or paragraph which was revised.

Example:

The vertical line in the margin indicates a change. |

Rev. No.	Description of Changes	Revision On Page(s)	Dated
0	Original Issue	All	
1	Incorporated QARG Comments	All	01/31/91
2	Revised to comply with RW-0214 Rev. 4, including ICN 4.1 and ASME NQA-1 1989	All	06/17/92

UNCONTROLLED*pg #7 - [signature]*

RECORD OF REVISION (CONTINUATION SHEET)

Rev. No.	Description of Changes	Revision on Page(s)	Dated
----------	------------------------	------------------------	-------

UNCONTROLLED

UNCONTROLLED

WVDP-074
Rev. 2

POLICY

The West Valley Demonstration Project (WVDP) Quality Assurance Program shall be implemented to the requirements of DOE Order 5700.6C, "Quality Assurance," and DOE-RW-0214 Rev. 4, including ICN 4.1, "Quality Assurance Program Requirements for the Office of Civilian Radioactive Waste Management Program" (OCRWM) and ASME/NQA-1, 1989 including all supplements as well as nonmandatory supplements 2A1 AND 2A3. It shall provide adequate assurance that an acceptable high-level radioactive waste form is produced at the WVDP for the federal repository operator in compliance with the OCRWM Waste Acceptance Preliminary Specifications (WAPS) for the West Valley Demonstration Project High-Level Waste Form, DOE/RW-0261.

Each major participant shall implement the Quality Assurance requirements for which it is responsible, and each participant shall verify compliance by overview of the programs of participants below it in the chain-of-command. Overview shall be performed as an organized program of review and revision, as necessary, to assure continued compliance with this policy.



Kenneth A. Chacey, Director
Vitrification Projects Division

UNCONTROLLED

WVDP-074
Rev. 2

FORWARD

This document describes the Quality Assurance Program of the West Valley Demonstration Project (WVDP) high-level waste form producer. The waste form producer is an organizational set of four separate, but interacting organizations:

1. DOE-EM, U.S. Department of Energy, Office of Environmental Restoration and Waste Management
2. DOE-ID, U.S. Department of Energy, Field Office, Idaho (QAPD-1)
3. WVPO, U.S. Department of Energy, West Valley Project Office (QAPD-2)
4. WVNS, West Valley Nuclear Services (QAPD-3)

They exist together as the WVDP's Vitrification Project organization in a vertical, descending line of authority. The authority, responsibility, and relationship of each organization to the others is described herein.

This document provides the three Quality Assurance Program Descriptions (QAPDs) for the individual West Valley Waste Form producer organizations, also referred to as "major participants." The DOE-EM portion of the QAPD for WVDP is provided by separate Office of Waste Operations documentation applicable to all waste form producer organizations. Figure 1 shows how each of the West Valley major participants contribute to this QAPD document. QAPDs 1 through 3 describe the program portions for the DOE Field Office, Idaho (DOE-ID), the DOE West Valley Project Office (DOE-WVPO), and the West Valley Nuclear Services (WVNS) site contractor. Also included are three appendices applicable to the overall WVDP Quality Assurance Program. Each section is used together to form the overall QA program. No one section can stand alone.

Each of the three WVDP QAPDs in this document describe the Quality Assurance Program implemented by the contributing participant and how it interacts with the other participant's programs, including DOE-EM. Together they describe the Quality Assurance Program for high-level radioactive waste acceptance process and production activities at the WVDP.

UNCONTROLLED

WVDP-074
Rev. 2

Although the overall responsibility for the West Valley Demonstration Project (WVDP)* Quality Assurance Program is retained by DOE-EM, the responsibility for establishing and implementing the WVDP Quality Assurance Program is shared by the three unique West Valley producer organizations. Final responsibility for the overall Quality Assurance Program, as applicable to the quality and acceptability of the canistered waste form is retained by the DOE Office of Civilian Radioactive Waste Management (OCRWM). The document control/distribution requirements for WVDP-074 is the responsibility of WVNS. Implementing procedures include the change policy requirements imposed by WVPO.

The paragraph numbering of QAPD's 1 through 3 is such that it can be prefixed by the number 17 and comply with licensing application requirements imposed on the federal repository operator. It is intended that the composite documents describe the portion of the repository operators' licensing application that is applicable to the WVDP's high-level Waste Acceptance Process activities.

The overall Quality Assurance Program is directed and administered by DOE-EM with the more detailed accountability at the performing level of Vitrification Project activities. This facilitates efficient conduct of the Project activities, eliminating redundant implementation of elements that are not within the scope of activities of a major participant, and allowing higher levels of Project management to focus on verification, guidance, and correction. The management process, which relies on delegation and overview, is summarized by figure 2.

* The West Valley Demonstration Project may be referred to throughout this document as the "the Project"

UNCONTROLLED

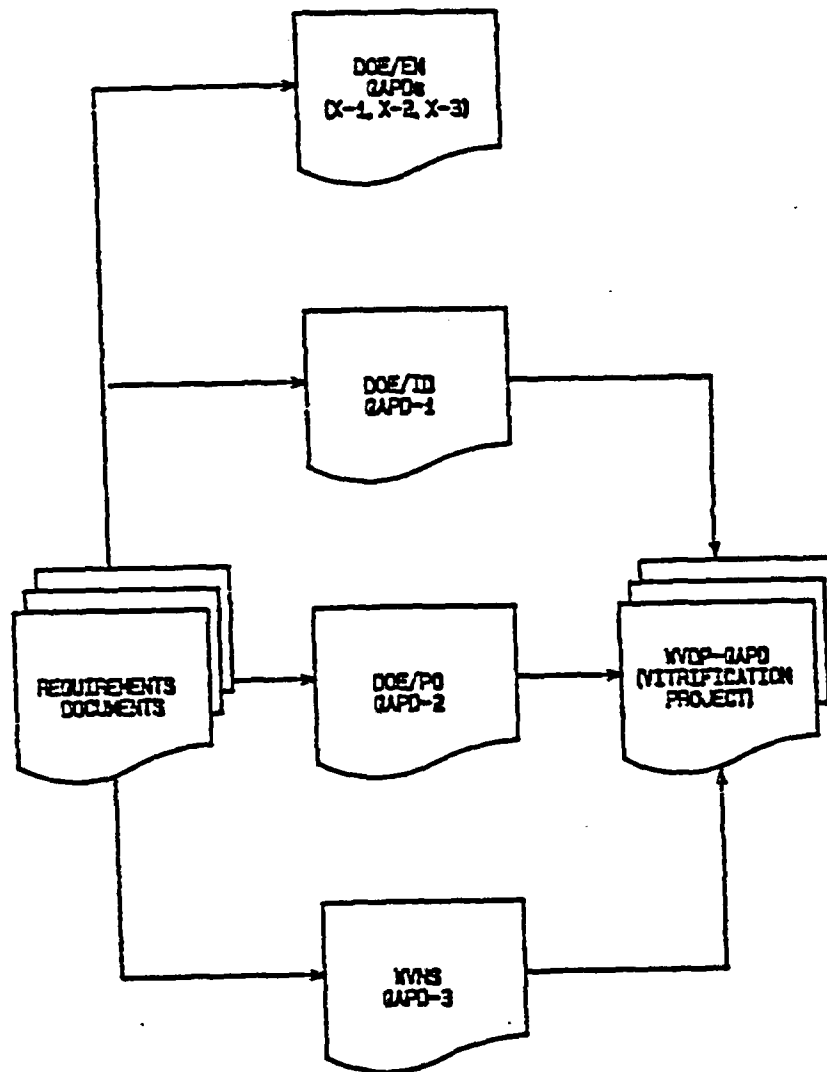


Figure 1

WVDP STRUCTURE OF AUTHORITY
FOR
HIGH-LEVEL WASTE VITRIFICATION PROJECT
QUALITY ASSURANCE PROGRAM REQUIREMENTS

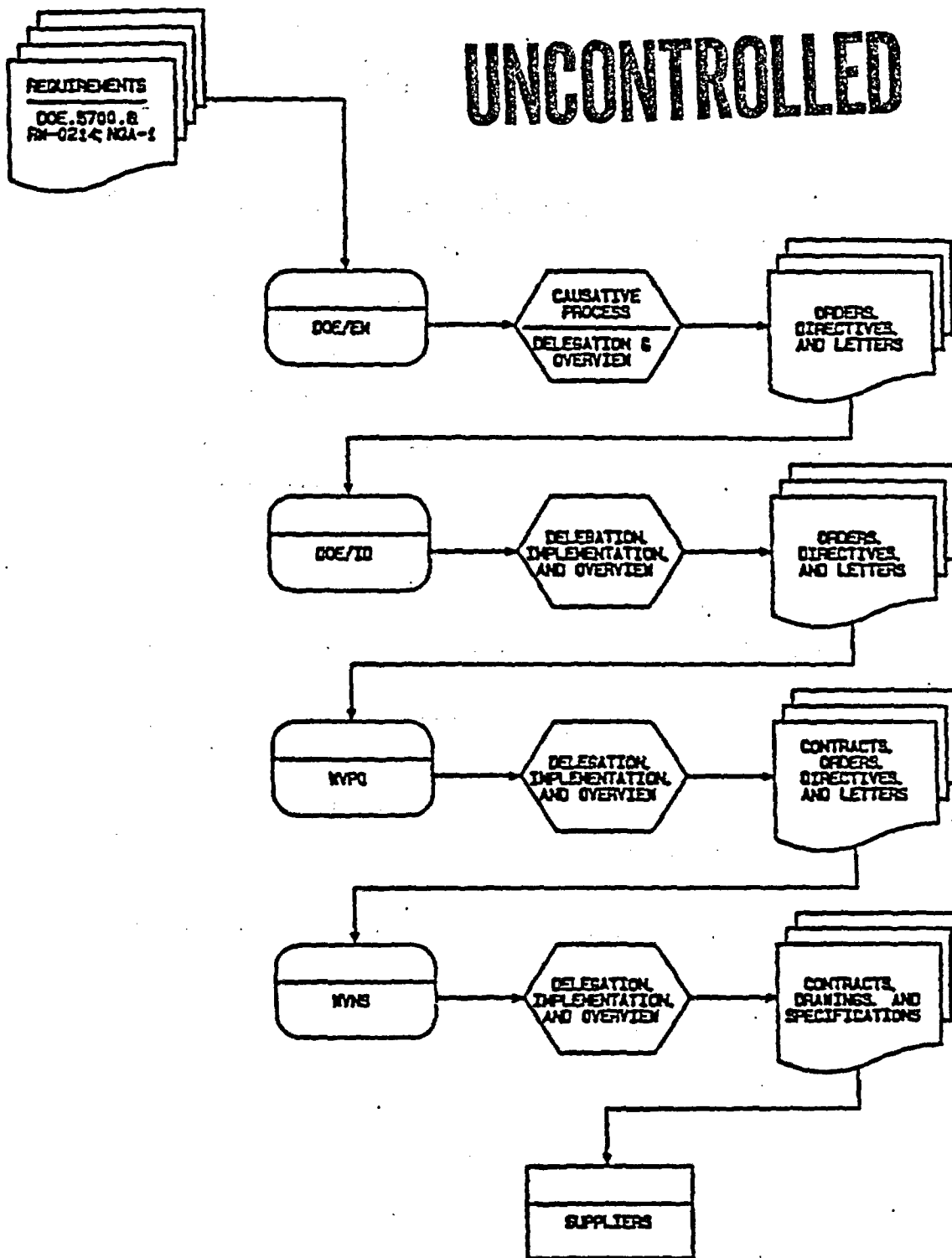


Figure 2

UNCONTROLLED

WVDP-074 TABLE OF CONTENTS

<u>DOCUMENT</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
QAPD-1	The DOE-ID Quality Assurance Program Description for West Valley High-Level Canistered Waste Form Production.....	1
QAPD-2	The DOE-WVPO Quality Assurance Program Description for West Valley High-Level Canistered Waste Form Production.....	41
QAPD-3	The WVNS Quality Assurance Program Description for West Valley High-Level Canistered Waste Form Production.....	92
Appendix I	Quality Activities List for WVDP QA Program,.....	AP-I-1
Appendix II	Glossary for West Valley Demonstration Project Quality Assurance Program.....	AP-II-1
Appendix III	Acronyms.....	AP-III-1

UNCONTROLLED

ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT QUALITY ASSURANCE POLICY

It is the policy of Environmental Restoration and Waste Management (ER&WM) that all ER&WM activities are to be planned and accomplished in accordance with applicable codes, standards, requirements, and good practices to meet the ER&WM goal of excellence in the conduct of operations. Plans and actions to assure the achievement of quality in ER&WM operations and facilities are to be developed and implemented under a formalized quality assurance program as one part of the overall ER&WM quality program. Work is to be conducted with the objective and attitude of achieving quality as the other part of the overall ER&WM quality program.

Quality Assurance Program Description (QAPD-1) has been reviewed against the requirements of DOE Order 5700.6C, "Quality Assurance," and DOE-RW-0214 "Quality Assurance Program Requirements for the Civilian Radioactive Waste Management Program" and was found to be acceptable. This Program Description is approved and shall be used by the Department of Energy Field Office, Idaho for West Valley Demonstration Project activities.



T. F. Burns Jr., Acting Assistant Manager
Environmental Restoration and Waste Management

UNCONTROLLED

WVDP-074
QAPD-1
Rev. 2

QAPD-1 TABLE OF CONTENTS

<u>QAPD-1</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
0.0	INTRODUCTION.....	4
	0.1 Scope.....	4
	0.2 Basis.....	5
	0.3 Application.....	5
1.0	ORGANIZATION.....	6
	1.1 Function.....	9
	1.2 Responsibility and Authority.....	10
	1.3 Organizational Arrangement.....	13
	1.4 Qualification Requirements.....	13
	1.5 Communications.....	15
2.0	QUALITY ASSURANCE PROGRAM.....	16
	2.1 Policy and Objectives.....	16
	2.2 Responsibility.....	16
	2.3 Requirements.....	19
	2.4 Staffing and Training.....	21
3.0	DESIGN CONTROL.....	23
4.0	PROCUREMENT DOCUMENT CONTROL.....	24
5.0	INSTRUCTIONS, PROCEDURES, AND DRAWINGS.....	24
6.0	DOCUMENT CONTROL.....	26
7.0	CONTROL OF PURCHASED ITEMS AND SERVICES.....	26
8.0	IDENTIFICATION AND CONTROL OF ITEMS.....	27
9.0	CONTROL OF PROCESSES.....	28
10.0	INSPECTION.....	29
11.0	TEST CONTROL.....	30
12.0	CONTROL OF MEASURING AND TEST EQUIPMENT.....	31
13.0	HANDLING, STORAGE, AND SHIPPING.....	32
14.0	INSPECTION, TEST, AND OPERATING STATUS.....	33

UNCONTROLLED

QAPD-1 TABLE OF CONTENTS

<u>QAPD-1</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
15.0	CONTROL OF NONCONFORMING ITEMS AND SERVICES.....	34
16.0	CORRECTIVE ACTION.....	35
17.0	QUALITY ASSURANCE RECORDS.....	36
18.0	AUDITS	37
19.0	COMPUTER SOFTWARE.....	39
Table 1 -	West Valley Producers RW-0214/NQA-1 Activity Table.....	7
Table 2 -	West Valley Producers RW-0214 Appendix B Activity Table...	8
Figure 1 -	WVDP Organization Chart.....	14
Figure 2 -	Major Elements of the DOE-ID Quality Assurance Program...	22
Appendix A -	DOE-ID ER&WM Implementing Procedures.....	40

UNCONTROLLED

WVDP-074
QAPD-1
Rev. 2

THE DOE FIELD OFFICE, IDAHO ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT QUALITY ASSURANCE PROGRAM DESCRIPTION FOR THE WEST VALLEY HIGH-LEVEL CANISTERED WASTE FORM PRODUCTION

0.0 INTRODUCTION

0.1 Scope

This QAPD-1 section of the WVDP Quality Assurance Program Description document describes that portion of the Program to be implemented by the U.S. Department of Energy/Field Office, Idaho (DOE-ID) to verify that the development, qualification, and production activities essential for waste acceptance, as defined in the Waste Acceptance Preliminary Specifications (WAPS), DOE/RW-0261 produce a canistered high-level waste form that is acceptable for shipping to and retention at a DOE repository. This program meets the requirements defined in the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program (RW-0214) and forms a part of the integrated West Valley Demonstration Project (WVDP) Quality Assurance Program. The program described herein shall outline the actions and activities to be taken by the DOE-ID to assure that the requirements of the repository program are effectively implemented by the West Valley Project Office (DOE-WVPO) and the West Valley Nuclear Services (WVNS) site contractor. The activities include verification, through audit and document review, of the various design, fabrication, construction, testing, and operational activities required to produce an acceptable high-level waste form product, including the glass form, the canister, and the production methods developed at the West Valley Demonstration Project.

0.2 Basis

QAPD-1 defines the activities performed or directed by DOE-ID as a part of the integrated Project Quality Assurance Program. Overall responsibility for assuring effective implementation of the Project Quality Assurance Program rests with the DOE Office of Environmental Restoration and Waste Management (DOE-EM). Responsibility for establishing and implementing portions of the program are delegated by DOE-EM to DOE-ID. Delegation by DOE-EM is described by the DOE-EM Quality Assurance Program Description for High-Level Waste Processing.

0.3 Application

The DOE-ID Quality Assurance Program described in this document is applicable to all high-level canistered waste form development, qualification, and production activities conducted at the West Valley Project. The activities covered include both the performing functions of achieving quality and the quality assurance functions. The quality assurance functions are those of: a) assuring that an appropriate Quality Assurance Program is established and effectively executed; and b) verifying, such as by checking, auditing, surveillance, and inspection, that activities affecting quality achievement (including safety functions) have been correctly performed. It is the purpose of the quality assurance functions to assure successful accomplishment of activities affecting quality with specific emphasis on those defined by RW-0214 as important to safety and important to waste isolation. Included in the program are those activities addressing waste form development and acceptance associated with the waste qualification and acceptance process. Essential elements of the program involve materials control, equipment, facilities, personnel, and procedures

used in the qualification and certification of the canistered waste form. The program applied to the waste acceptance activities assures that the canistered waste form will be acceptable to the licensed federal repository. Specific activities and systems that are covered by the WVDP High-Level Waste Quality Assurance Program are listed in appendix I.

The Quality Assurance Program is arranged into 19 elements, based on the 18 criteria of 10 CFR 50, Appendix B; NQA-1; and the amplified requirements of RW-0214. The requirements and supplemental requirements are individually addressed in the 19 subsections that follow and they are shown in tables 1 and 2. NQA-1 requirements are shown in table 1. RW-0214 appendix B requirements are shown in table 2. The tables show how the major participants' Quality Assurance Programs: a) implement the requirements at their level; b) flow-down the requirements to the next level; and c) perform overview of the elements at lower levels.

1.0 ORGANIZATION

Responsibility for acceptance of high-level radioactive waste resulting from the WVDP Waste Acceptance Process Activities rests with the DOE Office of Civilian Radioactive Waste Management (referred to as DOE-RW). A portion of this responsibility has been delegated for implementation to the DOE-ID Manager via DOE-EM. This responsibility is to assure the high-level canistered waste form product produced at the WVDP is developed, qualified, and certified in a way that will conform to all requirements of the OCRWM Repository Waste Acceptance Preliminary Specification (WAPS) DOE/RW-0261. To provide this assurance DOE-EM has directed the establishment and implementation of an integrated Quality Assurance Program which shall have the objectives, carry out the functions, and be executed as described in the rest of this document.

TABLE 1

WEST VALLEY PRODUCERS RW-0214/NQA-1 ACTIVITY TABLE

RW-0214/NQA-1			
Element and Supplements	DOE-ID	WVPO	WVNS
1. Organization	I D O	I D O	I D O
2. Program (including QAPD)	I D O	I D O	I D O
3. Design Control	D O	D O	I D O
4. Procurement Document Control	D O	D O	I D O
5. Procedures and Drawings	I D O	I D O	I D O
6. Document Control	I D O	I D O	I D O
7. Control of Purchased Items	D O	D O	I D O
8. Identification of Items	D O	D O	I D O
9. Process Control	D O	D O	I D O
10. Inspection	D O	D O	I D O
11. Test Control	D O	D O	I D O
12. Measuring and Test Equipment	D O	D O	I D O
13. Storage/Shipping	D O	D O	I D O
14. Operating Status	D O	D O	I D O
15. Control of Nonconforming Items	D O	D O	I D O
16. Corrective Actions	I D O	I D O	I D O
17. Quality Assurance Records	I D O	I D O	I D O
18. Audits	I D O	I D O	I D O
19. Computer Software	D O	D O	I D O
NQA-1 Appendix 2A-1	D O	D O	I D O
NQA-1 Appendix 2A-3	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

TABLE 2

RW-0214 APPENDIX B

WEST VALLEY PRODUCERS ACTIVITY TABLE

RW-0214 Appendix B	DOE-ID	WVPO	WVNS
2.1 Method Description	D O	D O	I D O
2.2 Readiness Reviews	D O	I D O	I D O
2.3 Graded Quality Assurance	D O	D O	I D O
2.4 Qualification of Personnel	D O	I D O	I D O
2.5 Management Assessments	I D O	I D O	I
3.1 Control of Experiments	D O	D O	I D O
3.1.5 Modification Control	D O	D O	I D O
3.2 Computer Software	D O	D O	I D O
9.0 Control of Processes	D O	D O	I D O
13.1 Archival of Samples	D O	D O	I D O
17.0 Records	D O	I D O	I D O
18.0 Audits	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant's Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

1.1 Function

1.1.1 The functions that DOE-ID will perform in order to achieve the stated objective of assuring effective implementation of the Quality Assurance Program and fulfill its responsibility for program adequacy are as follows:

- a. development of the DOE-ID Quality Assurance Program Description (QAPD-1) for conduct of the DOE-ID portion of the Project Quality Assurance Program,
- b. assignment and delegation of program implementation responsibilities to appropriate Project participants,
- c. overview of the implementation of program responsibilities delegated to appropriate Project participants. These include the WVPO and WVNS and any service contractors who perform quality assurance functions for DOE-ID,
- d. development of plans and procedures for conduct of the DOE-ID portion of the Project Quality Assurance Program,
- e. organizing and staffing appropriately or contracting work as appropriate to implement the DOE-ID program functions,
- f. provide for audit of project activities in accordance with the requirements of RW-0214,
- g. interfacing DOE-WVPO programs with DOE-RW programs, and
- h. evaluation and approval of the DOE-WVPO portion of the overall Project Quality Assurance Program.

1.2 Responsibility and Authority

1.2.1 The DOE-ID Assistant Manager for Environmental Restoration and Waste Management* (AM ER&WM) reports to the DOE-ID Manager. The AM ER&WM is assigned the responsibility of assuring that the Quality Assurance Program requirements as defined in the Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program (RW-0214) are correctly implemented and carried out by the implementing organizations at WVPO and WVNS. The AM ER&WM is authorized by the Deputy Director, Office of Waste Operations through the Director, Field Office, Idaho to:

- a. initiate, recommend, or provide solutions to quality related problems identified by DOE-ID in audits or other program reviews through designated channels,**
- b. verify implementation of solutions,**
- c. through audits or other reviews of the project, determine the adequacy of facilities and equipment provided to carry out Project approved procedures and instructions,**
- d. authorize issuance of special instructions necessary to implement assigned DOE-ID quality assurance responsibilities,**
- e. Stop Work Authority exists for all project activities, however, those affecting Quality are specifically delineated as follows: Stop work Authority resides**

*** Referred to throughout this document as the "AM ER&WM"**

within line management. Line management is the "owner/manager/operator" responsible for doing work. The AM ER&WM has the authority to orally "stop work" whenever, in his judgement, the quality of the product or operations is being compromised. Further, the AM ER&WM "Quality" Stop Work authority extends down the management line to the West Valley Project Office and West Valley Nuclear Services Company within the context of the "owner/manager/operator". The "line organization", upon observation of quality affecting deficiencies may orally notify the AM ER&WM, or other line management "owners" of the condition and provide a recommended action based on the situation as observed, but may not stop on their own recognizance. Stop Work in all cases is documented by the Stop Work form in accordance with procedures. The procedures also address the criteria for stopping work as well as the mechanism for lifting Stop Work.

Should a quality affecting Stop Work action be deemed necessary by an individual outside the direct line of authority, the individual shall immediately notify the AM ER&WM or other line management official within WVPO or the performing contractor, both orally and with follow up in writing, of the condition. Based on this information, the responsible line manager will decide on the need to issue a Stop Work Order. Once issued and once corrective action has been completed, it is incumbent on the part of the line manager to lift the Stop Work Action in accordance with procedures.

- f. ensure that provisions are established for resolution of allegations in accordance with OCRWM directives, and

- g. ensure adequate provisions for resolution of disputes involving quality.

1.2.2 The AM ER&WM has the delegated responsibility to assure that DOE-ID and DOE-ID delegated requirements of RW-0214 are correctly carried out. This task shall be accomplished through various means including the following:

- a. auditing or causing to be audited the Quality Assurance Programs of DOE-ID, WVPO, and the West Valley site contractor,
- b. performing or causing to be performed independent (of the Quality Assurance organization) management assessments of the DOE-ID and WVPO portions of the Project Quality Assurance Program,
- c. participating in readiness review activities at West Valley at key milestones for the project,
- d. identifying and supporting the resolution of alleged or proven quality related problems, and
- e. providing authenticated records of DOE-ID directed audits, assessments, reviews, and evaluations to the WVPO for Project records management and retention.

The AM ER&WM has delegated to the DOE West Valley Project Office Director (WVPO Director) the responsibility for establishing and assuring correct implementation of the requirements of RW-0214 at the Project site.

1.3 Organizational Arrangement

1.3.1 The DOE-ID organizational structure for performing quality-related tasks that assure effective implementation of the repository Quality Assurance Program requirements is one part of the DOE overall organizational structure shown on figure 1. The AM ER&WM is responsible for assuring the effective implementation of quality programs at all levels within the project scope.

1.4 Qualification Requirements

1.4.1 The AM ER&WM shall assure that the personnel or organizations performing the Quality Assurance Program Management auditing and monitoring activities assigned to the DOE-ID organization are qualified by virtue of experience and training. The individuals or organizations performing these activities shall have the following qualifications as a minimum:

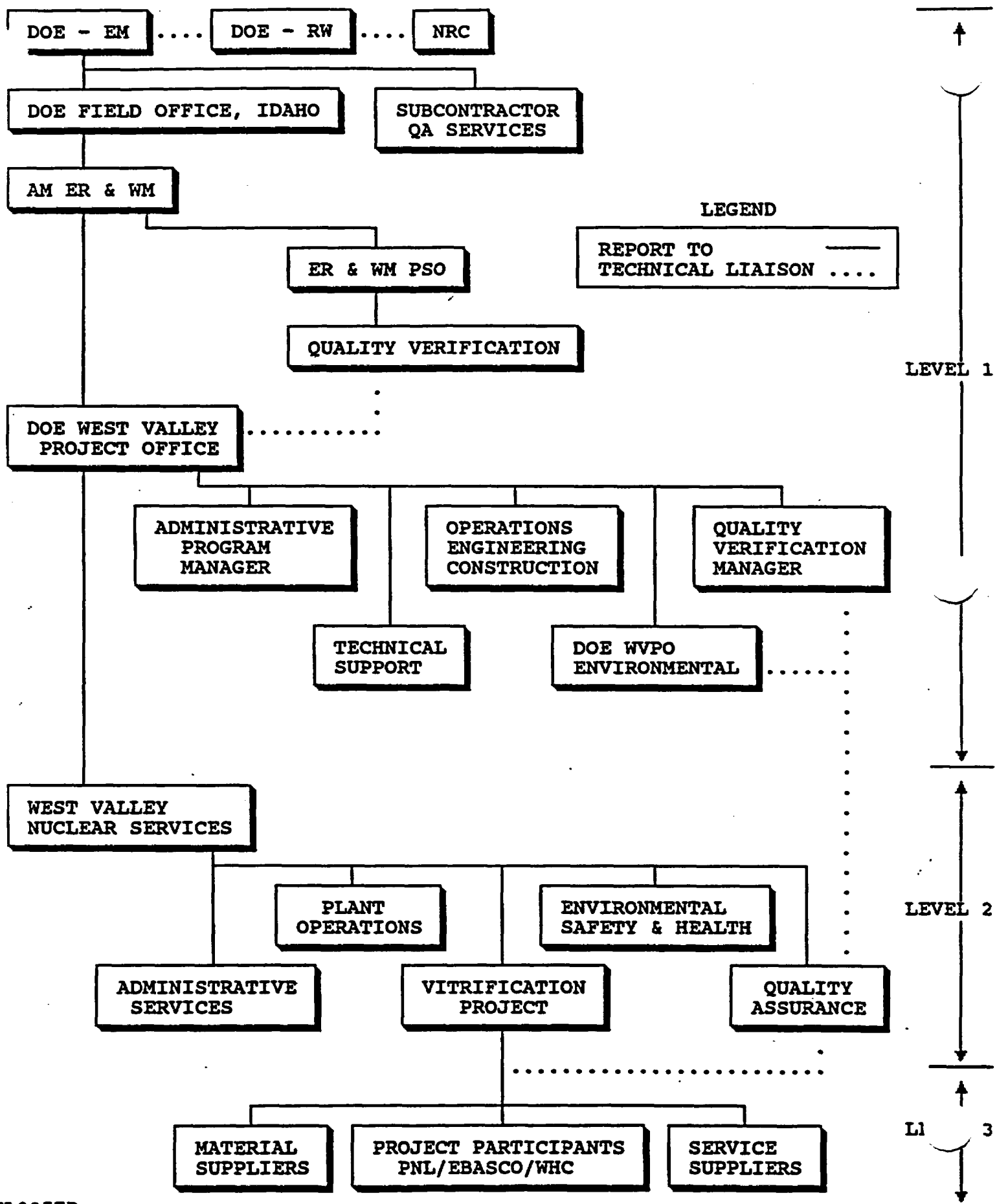
a. Education

He or she shall be a graduate of a four-year accredited engineering or science college or university, or equivalent.

b. Experience

General - He or she shall have a minimum of five (5) years experience in activities associated with nuclear facilities or equivalent industry. A minimum of three (3) years experience shall be in quality assurance.

WEST VALLEY DEMONSTRATION PROJECT ORGANIZATION CHART



- o Speciality - He or she shall possess a broad knowledge and understanding of applicable industry and government codes, standards, and regulations defining quality assurance requirements and practices.
- o He or she shall have a broad knowledge and experience in the areas of quality assurance and management.
- o He or she shall have experience in the planning, defining, and performing quality assurance practices and the application of procedures.
- o He or she shall have sufficient freedom from cost and schedule and no other duties or responsibilities unrelated to Quality Assurance.

1.5 Communications

1.5.1 To promote the flow of communications and to assure positive attention to quality programs with Project participants, lines of communications between DOE-ID and the WVPO are established as follows:

- a. communications will be addressed to the responsible senior management official with copies to the major Project participants cognizant of the subject,
- b. communications may be formal or informal, the choice of which shall depend on the significance of the subject and the judgement of the individuals involved, and

- c. communication of quality assurance-related activities between DOE-ID and WVPO or the site contractor (WVNS) is promoted through periodic Project progress and status reporting by major Project participants.

2.0 QUALITY ASSURANCE PROGRAM

2.1 Policy and Objectives

The policy and objectives of the DOE-ID WVDP Quality Assurance Program are:

- a. to assure quality is achieved in the development, qualification, and production of an acceptable canistered high-level waste form product from the WVDP,
- b. to assure that applicable quality assurance activities are implemented by or for DOE-ID in accordance with their importance to Project objectives. The extent of quality assurance controls shall be established using a graded methodology that applies controls according to importance and significance to quality, including appropriate consideration of NUREG-1318, "Technical Position on Items and Activities in the High-Level Waste Geologic Repository Program, Subject to Quality Assurance Requirements."

2.2 Responsibility

2.2.1 DOE-ID

- a. The AM ER&WM has the delegated responsibility, from DOE-EM via the DOE-ID Manager, to assure that the Quality Assurance Program at the West Valley Demonstration

Project Office is established and implemented effectively throughout the duration of Project activities.

- b. The AM ER&WM has responsibility to monitor, overview, audit, and participate in quality assurance activities as appropriate to assure that the Project quality programs for waste form production at WVDP are being implemented effectively. Implementation will include:
 - o An annual DOE-ID independent (of the Quality Assurance organization) management assessment of the adequacy and effectiveness of the DOE-ID portion of the Project Quality Assurance Program including: implementation, planning, procedures, staffing, organizational structure, training, indoctrination, communications, and conformance to the Waste Acceptance Preliminary Specification, PE-04.
 - o A DOE-ID conducted or directed annual internal audit of the combined DOE-ID/WVPO portions of the Project Quality Assurance Program.
 - o An annual joint DOE-ID/WVPO audit of the Project Quality Assurance Program activities under the direction of the WVNS site contractor.
 - o An ongoing DOE-ID review and evaluation of Project Quality Assurance Program activities, including, when appropriate, participation in WVPO conducted surveillances.

Results of assessments, audit reports, and other significant reports will be sent to DOE-EM for information.

- c. The AM ER&WM will assist the DOE-EM Deputy Director, Office of Waste Operations in interfacing between the Project and the regulating organizations of DOE-RW and the NRC.
- d. The AM ER&WM shall direct the planning and scheduling of independent oversight of the AM ER&WM and WVPO Quality Assurance Program with support from the DOE-ID Quality Assurance Branch.
- e. The AM ER&WM shall review, approve, and transmit for DOE-EM approval, the WVDP Quality Assurance Program Description prepared by WVPO and WVNS.
- f. The AM ER&WM monitors the status of program activities reported in the form of existing regular WVDP progress and status reports and other special reports as appropriate. These reports outline the progress and status of quality assurance activities, problems and nonconformances, quality trends, and results of audits. Management action, if not identified by these reports, required to improve conditions and further implement the program, will be initiated by the AM ER&WM. A quarterly summary of quality assurance program management information will be provided to DOE-EM by the AM ER&WM. This may be accomplished via monthly management reports.

2.2.2 Participants

- a. Although DOE-ID retains the DOE-EM delegated responsibility for adequacy of the overall Project Quality Assurance Program, other major participants are assigned by contract the responsibility for establishing

and assuring satisfactory implementation of particular program practices. These delegated program elements are described in section 2.3.

- b. Program participation responsibilities are described as a three-level structure. The DOE portion of the program is the first level. Other major program participants including major DOE subcontractors form the second level. The third level is composed of the multitude of systems, components, materials, and service suppliers that are directed by the second level. This three-level organization is graphically depicted in figure 1.

2.3 Requirements

2.3.1 Overall

The requirements for the overall Quality Assurance Program are contained in the Policy of this QAPD, and ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities. Amplified requirements applicable to waste form production are contained in RW-0214, and its appendix B, Amplifications of Quality Assurance Program Requirements for Waste Acceptance Process Activities of High-Level Waste Form Production. These requirements are illustrated by the identification of the program elements described in later sections of this Quality Assurance program description.

2.3.2 Program Elements Implemented by DOE-ID

Elements of the overall Project Quality Assurance Program which will be implemented by DOE-ID are those identified as Organization; Quality Assurance Program; Instructions,

Procedures and Drawings; Document Control; Quality Assurance Records, Audits, and Appendix 2A-3. DOE-ID will conduct these program elements in accordance with documented procedures and management practices. Figure 2 illustrates the principal elements of the DOE-ID program. DOE-ID quality assurance implementing procedures are identified in QAPD-1, appendix A.

2.3.3 Program Elements Delegated to Others

- a. The DOE responsibility for implementing program elements applicable to development, design, testing, and operational functions is delegated by DOE-ID to DOE-WVPO. WVPO may pass along those functions to the WVNS site contractor to assure that each function will be performed by the organization most qualified. Overall responsibility for adequate implementation and performance by the site contractor or its subcontractors is retained by DOE. Refer to QAPD-3 for details of the site contractor's Waste Acceptance Process Quality Assurance Program, and QAPD-2 for details of the WVPO's Quality Assurance Program. Tables 1 and 2 of QAPD-3 summarize delegation, participant implementation, and oversight responsibilities.
- b. Program elements delegated by DOE-ID may be executed through contracts. These contracts will specify applicable requirements for contractor Quality Assurance Programs, including the requirement that a program be established and functioning before initiation of activities affecting quality.

- c. The responsibility for establishing and implementing control systems for nonconformances and corrective action is delegated to major Project participants. DOE-ID delegates to WVPO the necessary responsibility and authority for participation and/or approvals to assure proper disposition of significant nonconformances and effectiveness of corrective action.

2.4 Staffing and Training

DOE-ID personnel who are assigned responsibility for verifying that quality assurance performance is in accordance with requirements are selected and assigned to their area of responsibility based upon experience, education, and management's assessment of their performance capabilities. Documented position descriptions are prepared to define required education, experience, and qualification requirements, including, as appropriate, certification to applicable codes and standards. Personnel performance is evaluated on an annual basis by cognizant DOE-ID management. Appropriate records of performance evaluation are maintained. On-going training and indoctrination programs are conducted to familiarize personnel with the technical objectives of the activity being monitored, the requirements that the activity must meet, the practices and procedures to be executed in verifying conformance to requirements, and the documentation of results.

DOE-ID QUALITY ASSURANCE PROGRAM ACTIVITIES

OVERALL PROGRAM
<ul style="list-style-type: none">o Objectiveso Responsibilitieso Requirementso Control and Verification

AND

PROGRAM MANAGEMENT	
<ul style="list-style-type: none">o Organization<ul style="list-style-type: none">StructureDocumentingo Quality Assurance Program<ul style="list-style-type: none">PlanningDevelopingReview and AssessmentDocumentingReportingIndoctrination and Trainingo Instructions, Procedures, and Drawings<ul style="list-style-type: none">Preparation, Review, and ApprovalIssue and DistributionChange Control	<ul style="list-style-type: none">o Document Control<ul style="list-style-type: none">Implementing Procedureso Corrective Action<ul style="list-style-type: none">from DOE-ID Oversighto Records<ul style="list-style-type: none">Records Preparationo Audits<ul style="list-style-type: none">Project AuditsAudit Recordso Appendix 2A-3, NQA-1<ul style="list-style-type: none">Qualification of lead AuditorsEducationExperienceCertificationEvaluation

Figure 2: Major Elements of the DOE-ID Quality Assurance Program

3.0 DESIGN CONTROL

3.1 DOE Implementation

DOE-ID has delegated implementation responsibility for design control activities to major Project participants through contracts. DOE-ID has delegated to WVPO the authority and responsibility for determining and establishing appropriate contractual delegation. The design activities are required to be in compliance with the DOE Orders and documents referenced in the Policy of this QAPD.

DOE-ID monitors these activities for adequacy through reviews, audits, and other appropriate means, including attendance at selected design reviews.

3.2 Requirements of Other Participants

Project participants who are assigned design control responsibility in support of waste form development, qualification, and production activities are required by contract to implement and maintain a design control practice that meets the requirements of the documents referenced in the Policy of this QAPD. Design control practices shall provide appropriate attention to design error and deficiency control, design changes, computer software design and control, technical reviews, peer reviews, control of experimental and development activities, qualification of data, and modification control. A description of WVDP design control practices is provided by QAPD-3.

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 DOE Implementation

DOE-ID will not procure items or technical services directly affecting WVDP development, waste form, qualification, and production. This responsibility is delegated to West Valley Nuclear Services through the WVPO. DOE-ID Contract Management Division, M&O Oversight Branch, places this O&M contract in accordance with the DEARS. (DOE Acquisition Regulations)

DOE-ID monitors these activities for adequacy through reviews, audits, and other appropriate means.

4.2 Requirements of Other Participants

Each major Project participant who is assigned procurement responsibility in support of waste form development, qualification, and production activities is required by contract to implement and maintain a procurement document control practice that meets the requirements of the documents referenced in the Policy of this QAPD. A description of WVDP procurement document control is provided by QAPD-3.

5.0 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

5.1 DOE Implementation

DOE-ID shall establish and/or implement appropriate procedures and instructions for DOE-ID conducted or directed quality assurance activities.

Project approved procedures prepared by WVPO or other major Project participants may be used for DOE-ID activities when applicable. If applicable Project approved procedures appropriate for DOE-ID

activities are not available, DOE-ID will take necessary action to develop and establish technically adequate procedures in accordance with appropriate quality requirements. Appendix A provides a listing of currently identified DOE-ID implementation procedures.

DOE-ID has delegated to WVPO authority and responsibility for requiring that participant organizations performing activities affecting quality of waste form development, qualifications, and production use instructions and procedures appropriate to the task being performed. Appropriate review and approval by quality assurance organizations and responsible management shall be required.

DOE-ID shall assure through reviews, audits, and other appropriate means that procedures in effect at the West Valley Project are adequate and complete and appropriate to the task being performed.

5.2 Requirements of Other Participants

Each Project participant is required to have an adequate and effective system of instructions, procedures, and drawings for activities affecting quality of waste form development, qualification, and production. This system is to be in accordance with the requirements of the DOE Orders and other documents referenced in the Policy of this QAPD. WVPO retains responsibility for preparation and control of procedures required for implementing its portion of the Quality Assurance Program. A description of the WVPO implementing practices is provided by QAPD-2. The more extensive contractor level practices for instructions, procedures, and drawings are described in QAPD-3.

6.0 DOCUMENT CONTROL

6.1 DOE Implementation

DOE-ID has established practices for document control that are consistent with the scope of its involvement with the West Valley Demonstration Project. The responsibility and authority for determining and assigning document control requirements to major Project participants is delegated to WVPO. Document control requirements applicable to waste form development, qualification, and production activities are identified in section 2.3.

DOE-ID shall assure through reviews, audits, and other means that the program participants have in place adequate and effective document control systems.

6.2 Requirements of Other Participants

Each major Project participant shall be required by contract to have a system and procedures in place for the control of quality affecting documents that is in accordance with the requirements of the documents identified in the Policy of this QAPD. The WVPO retained responsibilities for document control are described in the QAPD-2. The more extensive document control system established and maintained by the WVNS site contractor is described in QAPD-3.

7.0 CONTROL OF PURCHASED ITEMS AND SERVICES

7.1 DOE Implementation

DOE-ID has delegated to WVPO the responsibility and authority for assigning to Project participants the implementation responsibility for control of purchased items for waste form development,

qualification, and production activities that comply with applicable requirements from the documents identified in the Policy of this QAPD.

DOE-ID monitors through program reviews, audits, and other means the major participant procurement practices related to development and qualification activities.

7.2 Requirements of Other Participants

Project participants, who are assigned responsibility for procurement of items and services in support of waste form development, qualification, and production activities, are required, by contract, to establish and implement a system for control of those procurements in accordance with the DOE Orders and other documents referenced in the Policy of this QAPD. It is required that Supplier Quality Assurance Programs be reviewed and accepted before initiation of activities affected by their programs. A description of the procurement control practices of the site contractor are described by QAPD-3.

8.0 IDENTIFICATION AND CONTROL OF ITEMS

8.1 DOE Implementation

DOE-ID has delegated to WVPO the responsibility and authority for assigning implementation responsibility for identification and control of items which support waste form development, qualification, and production activities to the other major Project participants through contracts.

DOE-ID monitors through program reviews, audits, and other means the major participant identification and control of item practices related to waste form development, qualification, and production activities.

8.2 Requirements of Other Participants

Each Project participant, who has an assigned responsibility for items which support waste form development, qualification, and production activities is required, by contract, to establish and implement identification and control practices required by DOE Orders and other documents referenced in the Policy of this QAPD. Site contractor practices for identification and control of items are described by QAPD-3.

9.0 CONTROL OF PROCESSES

9.1 DOE Implementation

DOE-ID has delegated to WVPO the authority and responsibility for assignment of implementation responsibility for control of special processes in support of waste form development, qualification, and production activities to major Project participants through contracts.

DOE-ID monitors through program reviews, audits, and other means the major participant special processes control practices related to waste form development, qualification, and production activities.

9.2 Requirements of Other Participants

Project participants who are assigned responsibility for activities where special processes in support of waste form development, qualification, and production activities are involved, are required, by contract, to establish and implement practices to assure adequate performance and control of special

processes. Production processes for waste form production are considered to be special processes and shall be appropriately controlled. Controls shall meet the requirements of the documents referenced in the Policy of this QAPD, and are described in QAPD-3. A listing of WVDP special processes will be maintained by the site contractor (WVNS).

10.0 INSPECTION

10.1 DOE Implementation

DOE-ID has delegated to WVPO the authority and responsibility for assignment of implementation responsibility for direct inspection of items and work practices in support of waste form development, qualification, and production activities to major Project participants in their contractually assigned scope of work. DOE-ID or an agent may witness inspection on a selective basis. Should DOE-ID elect to have an agent perform inspections, the practice followed conforms to the same requirements imposed upon other participants.

DOE-ID monitors through program reviews, audits, and other means the major Project participant inspection practices associated with waste form development, qualification, and production activities.

10.2 Requirements of Other Participants

Each participant who is assigned responsibility for performing procurement, manufacturing, fabrication and assembly, testing, or operational activities in support of waste form development, qualification, and production is required, by contract, to establish and implement an inspection practice of sufficient scope to be fully effective. The inspection practice will identify and

verify conformance of items and services with the document specifications, instructions, procedures, and drawings for accomplishing the required activities. Inspection records will include identification of the inspection procedure, characteristics inspected, acceptance criteria, equipment used for inspection, and specific expertise used. The documented inspection practices shall meet the requirements of the documents referenced in the Policy of this QAPD. A description of inspection practices is provided in QAPD-3.

11.0 TEST CONTROL

11.1 DOE Implementation

DOE-ID has delegated to WVPO authority and responsibility for assignment of implementation responsibility for testing and test control practices in support of waste form development, qualification, and production activities to major Project participants by contracts. DOE-ID may witness tests by major Project participants on a selective basis and may, on limited occasions, require independent tests. Should DOE-ID elect to have an agent perform tests, the test control practices will conform to the same requirements imposed upon other participants.

DOE-ID monitors through program reviews, audits, and other means the major Project participant test control practices related to waste form development, qualification, and production activities.

11.2 Requirements of Other Participants

Each participant who is assigned responsibilities for performing manufacturing, fabrication, and assembly activities, or operational test activities in support of waste form development, qualification, and production activities is required by contract to establish, as applicable, proof tests, preoperational tests,

and product certification tests. Potential sources of uncertainty and error shall be identified and controlled. Precision and accuracy considerations shall be identified in test procedures. The testing activities shall meet the requirements of the documents referenced in the Policy of this QAPD. WVDP quality assurance practices for test control are described in QAPD-3.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 DOE Implementation

DOE-ID has delegated to WVPO the authority and responsibility for assigning implementation and responsibility for control of measuring and test equipment which supports waste form development, qualification, and production activities to the other major Project participants through contracts. Should DOE-ID elect to have an agent perform inspections, examinations, or tests, the measuring and test equipment is controlled in accordance with those requirements imposed upon the other participants.

DOE-ID monitors through program reviews, audits, and other means the major Project participant measuring and test equipment control practices related to waste form development, qualification, and production activities.

12.2 Requirements of Other Participants

Project participants who are assigned responsibility for performing inspections, examinations, or tests which support waste form development, qualification, and production activities are required by contract to establish and implement a system for calibration and control of measuring and test equipment (M&TE) that meets the requirements of the DOE Orders and other documents

referenced in the Policy of this QAPD. Calibration standards shall be equal to or have greater accuracy than the equipment being calibrated, unless limited by state of the art. Practices for control of measuring and test equipment are described in QAPD-3.

13.0 HANDLING, STORAGE, AND SHIPPING

13.1 DOE Implementation

DOE-ID has delegated to WVPO the authority and responsibility for assigning implementation responsibility for handling, storage, and shipping practices which support waste form development, qualification, and production activities to the other major Project participants through contracts.

DOE-ID monitors through program reviews, audits, and other means the major Project participant handling, storage, and shipping practices related to waste form development, qualification, and production activities.

13.2 Requirements of Other Participants

Each participant who is assigned responsibility for manufacturing, fabrication, or assembly which support waste form development, qualification, and production activities is required by contract to establish and implement practices for handling, storage, and shipping of items. Practices for handling, storage, and shipping shall meet the requirements of DOE Orders and other documents referenced in the Policy of this QAPD. A description of the practices for handling, storage, and shipping is provided by QAPD-3. Archival samples, if required for waste form qualification or for certification of canistered waste forms, shall be controlled in accordance with these practices.

14.0 INSPECTION, TEST, AND OPERATING STATUS

14.1 DOE Implementation

DOE-ID has delegated to WVPO authority and responsibility for assigning implementation responsibility for inspection, test, and operating status measures which support waste form development, qualification, and production activities to the other major Project participants through contracts.

DOE-ID monitors through program reviews, audits, and other means the adequacy of major participant practices related to waste form development, qualification, and production activities for indicating inspection, test, and operating status.

14.2 Requirements of Other Participants

Participants who are assigned responsibility for manufacturing, fabrication, and assembly; or operational (operation of test activities) activities which support waste form development, qualification, and production activities are required to establish and implement practices to indicate the status of inspection and tests performed upon individual items throughout waste form development, qualification, and production activities by using such markings as stamps, tags, labels, routing cards, or other suitable means. These practices shall meet the requirements of DOE Orders and other documents referenced in the Policy of this QAPD. A description of the practices for control of inspection, test, and operating status is provided by QAPD-3.

15.0 CONTROL OF NONCONFORMING ITEMS AND SERVICES

15.1 DOE Implementation

DOE-ID has delegated to WVPO the authority and responsibility for assuring control, review, and disposition of nonconforming items or activities which support waste form development, qualification, and production activities. Direct responsibility for nonconformance control is assigned to major Project participants by contract. DOE-ID shall have responsibility and authority to identify nonconforming items or activities and require that DOE-ID identified WVDP nonconformances be processed through the appropriate participant contractor's nonconformance control system. Closeout of DOE-ID identified nonconformances is the responsibility of DOE-ID.

DOE-ID shall assure through audits, overviews, and other means that the Project participants at the West Valley Demonstration Project have adequate and effective systems and procedures in place and functioning for the control of nonconforming items.

15.2 Requirements of Other Participants

Participants who are assigned responsibility for manufacturing, fabrication and assembly, or test activities which support waste form development, qualification, and production activities are required to establish and implement practices that control nonconforming items and services. These practices shall meet the requirements of DOE Orders and other documents referenced in the Policy of this QAPD. Nonconformance roles and functions retained by WVPO are described by QAPD-2. The WVNS site contractor practices for control of nonconformances are described in QAPD-3.

16.0 CORRECTIVE ACTIONS

16.1 DOE Implementation

DOE-ID retains the responsibility for corrective action, and has delegated to WVPO the authority for assuring contractor implementation of an adequate and effective corrective action system for waste form development, qualification, and production activities. Direct implementation responsibility for corrective action is assigned to major Project participants by contract. DOE review and approval authority shall be appropriately specified in WVPO approved contractor procedures. WVPO shall have the responsibility for notifying and involving DOE-ID in the review and approval of corrective action involvement as specified in WVPO procedures that has significant programmatic or Environmental, Safety, & Health (ES&H) consequences.

Program status and the status of significant conditions adverse to quality will be reported to appropriate levels of DOE-ID and DOE-EM management.

DOE-ID shall assure through audits, overviews, and other means that the major Project participants have in place systems and procedures that define and implement a corrective action system that meets the requirements of DOE Orders and other documents referenced in the Policy of this QAPD.

16.2 Requirements of Other Participants

Participants who are assigned responsibility for manufacturing, fabrication, and assembly; or operational test activities which support waste form development, qualification, and production activities are required to establish and implement practices that

determine the causes of and require corrective action to be taken to correct conditions adverse to quality and prevent recurrence. These practices shall meet the requirements of DOE Orders and documents referenced in the Policy of this QAPD. Quality information shall be promptly analyzed and examined for adverse quality trends. Trend analysis shall be performed so as to identify adverse quality trends. The corrective action practices shall include criteria for determining existence of significant conditions adverse to quality, and shall incorporate appropriate procedures for identification of root causes. Corrective action documentation shall be provided to appropriate DOE and contractor management and shall require quality assurance organizational concurrence with proposed actions. WVPO roles and functions are described in QAPD-2. Overall WVNS site contractor practices for corrective action are described in QAPD-3.

17.0 QUALITY ASSURANCE RECORDS

17.1 DOE Implementation

DOE-ID has an established record system for DOE-ID-generated records required to support the overall Project Quality Assurance Program. DOE-ID has delegated to WVPO the authority and responsibility for assigning records implementation responsibility for records preparation, collection, storage, and maintenance to major Project participants by contract. DOE-ID has also delegated to WVPO the authority and responsibility for establishing acceptable Project records management and retention that will include DOE-generated records supporting verification of acceptable waste form development, qualification, and production activities. Audit records and other records generated and identified by DOE-ID as Quality Assurance records will be transmitted to WVPO for central records management and retention.

DOE-ID shall assure through reviews, audits, and other means that the Project participants have in place systems for the collection, management, storage, and maintenance of records important to the development, qualification, and production activities. These systems shall meet the requirements for record control as specified by DOE System 80, and Program Management Policies and Requirements (PMPR) specific to Records Management and the documents referenced in the Policy of this QAPD.

17.2 Requirements of Other Participants

Program participants, who are assigned responsibility for Quality Assurance records in support of development, qualification, and production activities, are required by contract to establish and implement a system for control of those Quality Assurance records in accordance with the DOE Orders and other documents referenced in the Policy of this QAPD. Identification of documentation requiring control as permanent records will be established by the Waste Form Compliance Plan (WCP) and/or Waste Form Qualification Report (WQR). Production documentation traceable to each canister will be transferred to the Federal Repository Operator. WVPO practices for control of DOE generated records are described in QAPD-2. A description of the overall records control and records management practices is provided by QAPD-3. As applicable, records control practices shall meet the requirements of DOE/EM/WO/04 Rev. 0, Vitrification Projects Records Management Policies and Requirements, including Appendix E.

18.0 AUDITS

18.1 DOE Implementation

DOE-ID is responsible for establishing and maintaining a system

for the performance of internal and external audits, to assess the status, adequacy, and effectiveness of the quality programs of Project participants at the West Valley Demonstration Project. DOE-ID management shall be actively involved with the audit process. Internal audits of the DOE-ID portion of the WVDP program shall be performed annually. An annual audit of the WVPO program implementation shall be performed by or for DOE-ID. Audit results will be analyzed and documented by the audit team. Product quality and technical adequacy shall be appropriately addressed. Audit teams will include appropriately trained and qualified representation in the technology being audited. The system shall provide for planning, scheduling, performing, and reporting on the status of the quality programs to senior DOE-ID and DOE-EM management. Schedules will be developed annually and updated quarterly. Corrective action for findings from DOE-ID audits will be requested by letter transmittal to the audited organization. DOE-ID will assure audit adequacy and will assure that follow up of identified conditions adverse to quality is performed until satisfactory resolution is obtained.

DOE-ID has delegated to WVPO the responsibility and authority for assuring implementation of effective audit programs by other major Project participants. Assignment of Project audit responsibility, as required by the DOE Orders and documents referenced in the Policy of this QAPD is established by contract.

18.2 Requirements of Other Participants

Program participants, who are assigned responsibility for quality assurance audits in support of waste form development, qualification, and production activities, are required by contract to establish and implement a system for control of those quality assurance audits in accordance with the DOE Orders and other

documents referenced in the Policy of this QAPD. WVPO audit practices are described by QAPD-2. The site contractor, WVNS, audit program is described in QAPD-3.

19.0 COMPUTER SOFTWARE

19.1 DOE Implementation

DOE-ID has delegated responsibility for control of computer software to major project participants through contracts. DOE-ID has delegated to WVPO the authority and responsibility for determining and establishing appropriate contractual delegation. Computer software control is required to be in compliance with the DOE Orders and documents referenced in the Policy of this QAPD.

DOE-ID monitors those activities for adequacy through review, audits, and other appropriate means.

19.2 Requirements for Other Participants

Project participants assigned responsibility for waste form development, qualification, or production activities are required by contract to implement and maintain required computer software control. Description of computer software control is provided by Section 19.0 of QAPD-3.

APPENDIX A

DOE-ID ER&WM Implementing Procedures

Environmental Restoration & Waste Management Instructions	ER&WM 102
Document Management	ER&WM 109
Performance Indicator Reporting	ER&WM 305
Shutdown, Stop Work, and control of Unsatisfactory Conditions	ER&WM 505
Conduct of Operations	ER&WM 506
Investigation and Reporting Requirements of ES&H Protection Issues	ER&WM 508
Change Control Boards	ER&WM 602
Review of Quality Assurance Program Plans	ER&WM 603
Quality Assurance Implementation	ER&WM 604
Administration of Audits	ER&WM 804
Conduct of Audits	ER&WM 805
Monitoring/Surveillances/Walkdowns	ER&WM 806
Performance Indicator Trending and Analysis	ER&WM 807

UNCONTROLLED

WEST VALLEY PROJECT OFFICE QUALITY ASSURANCE POLICY

It is the goal of the West Valley Project Office (WVPO) to promote a broad knowledge of quality and demonstrate a commitment to achieving a steadily rising standard of excellence.

The responsibilities for Quality at the West Valley Demonstration Project (WVDP) rests with all project participants. The West Valley Demonstration Project Office (WVPO) ensures that quality assurance is applied commensurate with the complexity of the product/service and consequence of failure. Controls are based on item classification which range from items important to worker and public safety to commercial grade items. The implementation of requirements for the overall Quality Assurance Program is contained in DOE-HQ Order 5700.6C, "Quality Assurance"; and ASME NQA-1 1989, "Quality Assurance Program Requirements for Nuclear Facilities." In addition, the amplified requirements applicable to waste form production are contained in DOE "Radioactive Waste RW-0214/QAPD-2 Quality Assurance Program Description" and its appendix B, "Amplifications of Quality Assurance Program Requirements for Waste Acceptance Process Activities of High Level Waste Form Production." Classification and levels of control are applied as appropriate to assure each task is done right the first time to meet these requirements in a safe, environmentally sound, and cost effective manner.

New York State Department of Environmental Conservation and Environmental Protection Agency Quality Assurance requirements are incorporated into the overall program as appropriate.

Proactive Quality Assurance Program shall be maintained and verified to assure that WVDP products and services meet requirements and are fit for use.

All WVPO personnel shall be provided the necessary tools, guidance and training to perform and actively participate in the integrated Quality Assurance Program.

Quality Assurance Program Description 2 has been reviewed against the requirements of DOE Order 5700.6C, "Quality Assurance," and DOE-RW-0214 "Quality Assurance Program Requirements for the Civilian Radioactive Waste Management Program" and was found to be acceptable. This Program Description is approved and shall be used by the Department of Energy West Valley Project Office for West Valley Demonstration Project activities.


T. J. Rowland, Director
West Valley Project Office

QAPD-2 TABLE OF CONTENTS

<u>QAPD-2</u>	<u>SUBJECT</u>	<u>PAGE</u>
0.0	INTRODUCTION.....	45
0.1	Scope.....	45
0.2	Basis.....	46
0.3	Application.....	46
1.0	ORGANIZATION.....	47
1.1	Function.....	50
1.2	Responsibility and Authority.....	51
1.3	Organizational Arrangements.....	54
1.4	Qualification Requirements for Quality Assurance.....	54
	Management Position	
1.5	Communications.....	56
2.0	QUALITY ASSURANCE PROGRAM.....	57
2.1	Policy and Objectives.....	57
2.2	Responsibility.....	58
2.3	Requirements.....	61
2.4	Staffing and Training.....	66
3.0	DESIGN CONTROL.....	67
3.1	DOE Implementation.....	67
3.2	Requirements of Other Participants.....	68
4.0	PROCUREMENT DOCUMENT CONTROL.....	68
4.1	DOE Implementation.....	68
4.2	Requirements of Other Participants.....	69
5.0	INSTRUCTIONS, PROCEDURES, AND DRAWINGS.....	69
5.1	DOE Implementation.....	69
5.2	Requirements of Other Participants.....	70
6.0	DOCUMENT CONTROL.....	70
6.1	DOE Implementation.....	70
6.2	Requirements of Other Participants.....	72
7.0	CONTROL OF PURCHASED ITEMS AND SERVICES.....	73
7.1	DOE Implementation.....	73
7.2	Requirements of Other Participants.....	73

UNCONTROLLED

QAPD-2 TABLE OF CONTENTS (CONTINUED)

<u>QAPD-2</u>	<u>SUBJECT</u>	<u>PAGE</u>
8.0	IDENTIFICATION AND CONTROL OF ITEMS.....	74
8.1	DOE Implementation.....	74
8.2	Requirements of Other Participants.....	74
9.0	CONTROL OF PROCESSES.....	74
9.1	DOE Implementation.....	74
9.2	Requirements of Other Participants.....	75
10.0	INSPECTION.....	75
10.1	DOE Implementation.....	75
10.2	Requirements of Other Participants.....	76
11.0	TEST CONTROL.....	76
11.1	DOE Implementation.....	76
11.2	Requirements of Other Participants.....	77
12.0	CONTROL OF MEASURING AND TEST EQUIPMENT.....	77
12.1	DOE Implementation.....	77
12.2	Requirements of Other Participants.....	78
13.0	HANDLING, STORAGE, AND SHIPPING.....	78
13.1	DOE Implementation.....	78
13.2	Requirements of Other Participants.....	79
14.0	INSPECTION, TEST, AND OPERATING STATUS.....	79
14.1	DOE Implementation.....	79
14.2	Requirements of Other Participants.....	80
15.0	CONTROL OF NONCONFORMING ITEMS.....	80
15.1	DOE Implementation.....	80
15.2	Requirements of Other Participants.....	81
16.0	CORRECTIVE ACTION.....	81
16.1	DOE Implementation.....	81
16.2	Requirements of Other Participants.....	83

UNCONTROLLED

WVDP-074
QAPD-2
Rev. 2

QAPD-2 TABLE OF CONTENTS (CONTINUED)

<u>QAPD-2</u>	<u>SUBJECT</u>	<u>PAGE</u>
17.0	QUALITY ASSURANCE RECORDS.....	83
17.1	DOE Implementation.....	83
17.2	Requirements of Other Participants.....	85
18.0	AUDITS AND SURVEILLANCES.....	86
18.1	DOE Implementation.....	86
18.1.1	Audits.....	86
18.1.2	Surveillance.....	89
18.2	Requirements of Other Participants.....	89
19.0	COMPUTER SOFTWARE.....	90
19.1	DOE Implementation.....	90
19.2	Requirements of other participants.....	90
Table 1	- West Valley Producers RW-0214/NQA-1 Activity Table.....	48
Table 2	- West Valley Producers Activity Table.....	49
Figure 1	- WVDP Organization Chart.....	55
Figure 2	- Major Elements of the DOE Quality Assurance Program.....	63
Appendix A	- WVPO Implementing Procedures.....	91

DOE-WVDP-WVPO
QUALITY ASSURANCE PROGRAM DESCRIPTION
FOR THE WEST VALLEY
HIGH-LEVEL CANISTERED WASTE FORM PRODUCTION

0.0 INTRODUCTION

0.1 Scope

This QAPD-2 section of the WVDP Quality Assurance Program Description document contains a description of the plans and actions by the US Department of Energy (DOE), West Valley Project Office (WVPO), to assure that quality is achieved in the development, qualification, and production as defined in PE-04, the Waste Acceptance Preliminary Specifications (WAPS) for the canistered high-level waste form product from the West Valley Demonstration Project (WVDP). Development and qualification activities include the research and development work to arrive at an acceptable high-level waste form, canister for the waste form, and ultimately the canistered waste form product. Also included is the design and development of the high-level waste form production process (and equipment) to perform that process at the DOE West Valley Demonstration Project. It further includes the testing necessary to demonstrate that the canistered waste form product from the WVDP will satisfy all requirements of the Waste Acceptance Preliminary Specifications (WAPS). The program consisting of the specific Quality Assurance plans and actions referenced above is hereafter referred to as the "Project Quality Assurance Program." This program meets the requirements defined in the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program (RW-0214).

0.2 Basis

QAPD-2 defines the WVPO activities and responsibility for assuring the adequacy and effectiveness of the overall Project Quality Assurance Program. The WVPO authority and responsibility was established by the delegation from DOE-ID, as described by QAPD-1. Responsibility for establishing and implementing portions of the overall Project Quality Assurance Program has been further delegated by WVPO to others participating in the Project, with responsibility for the adequacy of their performance retained by the WVPO.

0.3 Application

The WVPO Quality Assurance Program described herein is an inclusive program applicable to all high-level canistered waste form development, qualification, and production activities essential to product acceptance. Activities covered by the Program include both the performing functions of achieving quality and the quality assurance functions. The quality assurance functions are those of: a) assuring that an appropriate Quality Assurance Program is established and effectively executed; and b) verifying, such as by checking, auditing, surveillance, and inspection, that activities affecting quality achievement (including safety functions) have been correctly performed. These activities are associated with research and development that are essential to qualification of the waste form; control of materials, equipment, facilities, and processes that are essential to the certification of the canistered waste forms; and processing operations that are essential to the certification of canistered waste forms. The program applied to waste acceptance activities implements

additional provisions to assure the canistered waste form will be acceptable to a licensed federal repository. Specific activities and systems covered by this WVDP program are listed in appendix I.

The Project Quality Assurance Program is arranged into 19 elements, based on the criteria of 10 CFR 50, appendix B, and of NQA-1. Each amplified requirement of RW-0214 is included in the criterion appropriate to its topic. The requirements and supplemental requirements are individually addressed in the 19 subsections that follow and they are shown in tables 1 and 2. NQA-1 requirements are shown in table 1. RW-0214 appendix B requirements are shown in table 2. The tables show how the major participants' Quality Assurance Programs: a) implement the requirements at their level; b) flow-down the requirements to the next level; and c) perform overview of the elements at lower levels.

1.0 ORGANIZATION

Responsibility for acceptance of high-level radioactive waste resulting from the WVDP Waste Acceptance Process Activities rests with the DOE Office of Civilian Radioactive Waste Management (DOE-RW). Responsibility for implementation has been delegated to the DOE West Valley Project Office (WVPO) through DOE-EM, the Field Office, Idaho (DOE-ID) Manager, and the DOE-ID Assistant Manager for Environmental Restoration and Waste Management (AM ER&WM). This delegated responsibility includes assurance that the high-level canistered waste form product produced by the WVDP is developed, qualified, and certified in a way that will conform to all requirements of the PE-04 Waste Acceptance Preliminary Specification (WAPS). To provide this assurance, the AM ER&WM has directed the establishment and conduct of an overall integrated Project Quality Assurance Program which shall have the objectives, carry out the

TABLE 1

WEST VALLEY PRODUCERS RW-0214/NQA-1 ACTIVITY TABLE

RW-0214/NQA-1			
Element and Supplements	DOE-ID	WVPO	WVNS
1. Organization	I D O	I D O	I D O
2. Program (including QAPD)	I D O	I D O	I D O
3. Design Control	D O	D O	I D O
4. Procurement Document Control	D O	D O	I D O
5. Procedures and Drawings	I D O	I D O	I D O
6. Document Control	I D O	I D O	I D O
7. Control of Purchased Items	D O	D O	I D O
8. Identification of Items	D O	D O	I D O
9. Process Control	D O	D O	I D O
10. Inspection	D O	D O	I D O
11. Test Control	D O	D O	I D O
12. Measuring and Test Equipment	D O	D O	I D O
13. Storage/Shipping	D O	D O	I D O
14. Operating Status	D O	D O	I D O
15. Control of Nonconforming Items	D O	D O	I D O
16. Corrective Actions	I D O	I D O	I D O
17. Quality Assurance Records	I D O	I D O	I D O
18. Audits	I D O	I D O	I D O
19. Computer Software	D O	D O	I D O
NQA-1 Appendix 2A-1	D O	D O	I D O
NQA-1 Appendix 2A-3	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

TABLE 2

RW-0214 APPENDIX B

WEST VALLEY PRODUCERS ACTIVITY TABLE

RW-0214 Appendix B	DOE-ID	WVPO	WVNS
2.1 Method Description	D O	D O	I D O
2.2 Readiness Reviews	D O	I D O	I D O
2.3 Graded Quality Assurance	D O	D O	I D O
2.4 Qualification of Personnel	D O	I D O	I D O
2.5 Management Assessments	I D O	I D O	I
3.1 Control of Experiments	D O	D O	I D O
3.1.5 Modification Control	D O	D O	I D O
3.2 Computer Software	D O	D O	I D O
9.0 Control of Processes	D O	D O	I D O
13.1 Archival of Samples	D O	D O	I D O
17.0 Records	D O	I D O	I D O
18.0 Audits	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant's Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

functions, and be implemented as described in the rest of this document.

1.1 Function

1.1.1 Functions that WVPO will perform in order to achieve the stated objectives of the Project Quality Assurance Program and fulfill its responsibility for program adequacy are as follows:

- a) development of the WVPO Quality Assurance Program Description (QAPD-2) for conduct of the WVPO portion of the Project Quality Assurance Program,
- b) assignment and delegation of program implementation responsibility to appropriate Project participants. These include the contractors and subcontractors who participate in the Project, as well as service contractors who only perform independent quality assurance verification activities,
- c) development of instructions, plans, and procedures for conduct of the WVPO portion of the Project Quality Assurance Program,
- d) organizing and staffing appropriately or contracting work as appropriate to implement WVPO Project QA program functions,
- e) implementation of WVPO program activities,
- f) interfacing of major participant programs with DOE's program,

- g) evaluation and approval of major participant Quality Assurance Programs, and
- h) development and implementation of procedures where DOE elects to retain full or partial implementation responsibility.

1.2 Responsibility and Authority

1.2.1 The West Valley Demonstration Project Director (WVPO Director), who reports directly to the DOE Field Office, Idaho (DOE-ID) Assistant Manager for Environmental Restoration and Waste Management (AM ER&WM) is assigned responsibility for development, implementation, and effective application of the overall Project Quality Assurance Program. In carrying out these responsibilities, the WVPO Director is authorized by the AM ER&WM through the Idaho Operations Office Manager to:

- a) initiate, recommend, or provide solutions to quality problems identified by WVPO in audits, surveillances, or other program reviews through designated channels,
- b) verify implementation of solutions,
- c) determine the adequacy of facilities and equipment provided to carry out Project approved procedures and instructions,
- d) authorize issuance of special instructions necessary to execute his or her responsibilities,

- e) Stop Work Authority on matters affecting Quality is extended down the line organization by AM ER&WM to WVPO. WVPO line staff managers may issue orally Stop Work when, in their judgement, the quality of the product or operation under their assigned area of responsibility is being compromised. Stop Work in all cases is documented by the Stop Work form in accordance with procedures. The procedures address the criteria for stopping work as well as the mechanism for lifting Stop Work and controlling further processing until the situation is corrected.

Should a quality affecting Stop Work action be deemed necessary by an individual outside of direct line management, the individual shall immediately notify the responsible line manager within the WVPO or the performing contractor both orally and with follow up in writing of the condition. Based on this information, the responsible line manager will decide on the need to issue a Stop Work Order. Once issued and once corrective action has been completed it is incumbent on the line manager to lift the Stop Work Action in accordance with procedures.

- f) establish through the WVNS site contractor a system for resolution of allegations in accordance with OCRWM directives, and
- g) ensure that adequate provisions are established for resolution of disputes involving quality.

1.2.2 The WVPO Director is responsible for the following specific tasks:

- a) Organizing the overall Project Quality Assurance Program and for making further assignments of implementation responsibility as appropriate.**
- b) Assuring that each major participant's program enables the person or organization responsible for assuring an appropriate Quality Assurance Program to have sufficient authority to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions.**
- c) Recommending to the DOE-ID Manager the organization and staffing plan for the WVPO in the conduct of quality assurance activities necessary to fulfill DOE responsibilities for establishment and adequacy of the overall Project Quality Assurance Program.**
- d) Technical and administrative control of individuals within the WVPO performing quality related activities.**
- e) Collecting DOE-EM, DOE-ID, and WVPO generated quality assurance records and transferring these records to the WVDP Master Records Center (MRC) for records management and retention..**

1.3 Organizational Arrangements

1.3.1 DOE's overall organizational structure for performing quality-related activities is reflected in figure 1.

The WVPO Director has assigned to the WVPO Environmental Safety, Health, and Quality Verification (ESH&QV) Program Manager responsibility for the following quality assurance functions:

- a) Quality Verification
- b) Quality Engineering
- c) Records Control

The ESH&QV Program Manager reports directly to the WVPO Director and has effective and direct communications to the ID-ER&WM and the DOE-ID program support office. Assigned functions, including quality assurance, permit full attention to quality matters, and provide sufficient independence from cost and schedule considerations. He or she is designated as responsible for the adequacy and effectiveness of quality assurance functions delegated to the site contractor.

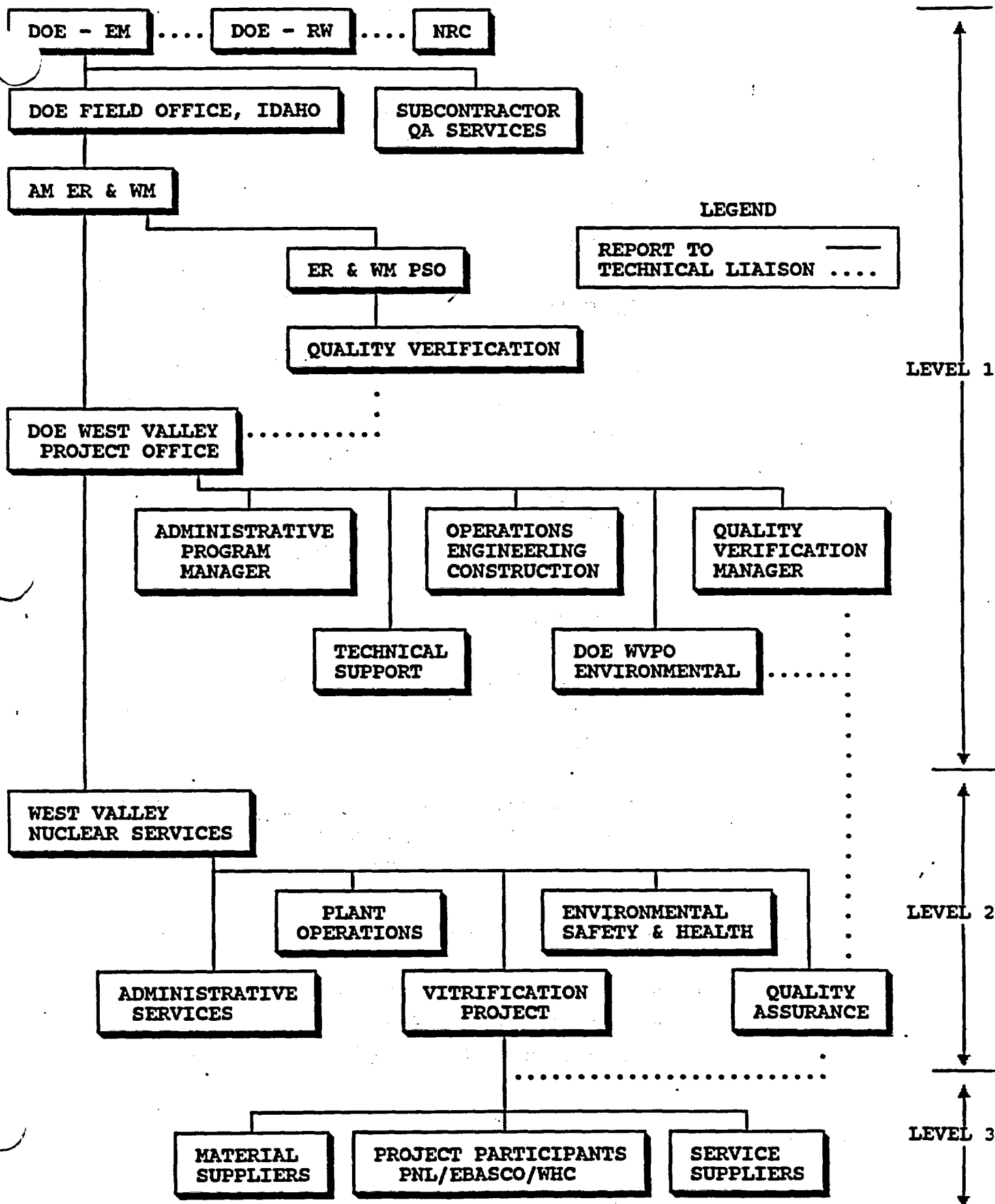
1.4 Qualification Requirements for Quality Assurance Management Position

1.4.1 WVPO Environmental, Safety, Health, and Quality Verification Program Manager and Quality Verification Manager

The individuals assigned to establish and maintain an adequate and effective overall Project Quality Assurance Program are the WVPO Environmental, Safety, Health, and Quality Verification Program Manager and the Quality Verification Manager. They will each have the following qualifications:

WEST VALLEY DEMONSTRATION PROJECT ORGANIZATION CHART

WVDP-074
QAPD-2
Rev. 2



Education

He or she shall be a graduate of a four-year accredited engineering or science college or university, or equivalent.

Experience

General - He or she shall have a minimum of five (5) years experience in activities associated with nuclear facilities or equivalent industry. A minimum of three (3) years experience shall be in quality assurance.

Speciality - He or she shall possess a broad knowledge and understanding of applicable industry and government codes, standards and regulations defining quality assurance requirements and practices.

He or she shall have a broad knowledge and understanding of quality assurance methods and their application.

He or she shall have experience in planning, defining and performing quality assurance practices and the application of procedures.

1.5 Communications

- 1.5.1 WVPO provides a Project focal point for the flow and transmittal of Project documentation. This includes documentation submitted by WVNS, or other participants,

for DOE review or approval. For example, WVPO receives and transmits information submitted for review by the DOE directed WVDP Technical Review Groups (TRG). To promote the flow of communications and to assure positive attention to quality programs with Project participants, lines of communications between DOE and the organization of other major Project participants are established as follows:

- a) Communications will be addressed to the responsible senior management official with copies to the major Project participants cognizant of the subject.
- b) Communications may be formal or informal, the choice of which shall depend on the significance of the subject and the judgement of the individuals involved.
- c) Communication of quality assurance-related activities between the DOE organization and the organizations of major Project participants is promoted through periodic progress and status reporting by major participants.

2.0 QUALITY ASSURANCE PROGRAM

2.1 Policy and Objectives

The policy and objectives of the WVPO Quality Assurance Program are:

- a) To assure that quality is achieved in the development, qualification and production of an acceptable canistered high-level waste form product from the WVDP.

- b) To assure that applicable quality assurance activities are implemented by or for the WVPO in accordance with their importance to Project objectives. The extent of quality assurance controls shall be established using a graded methodology that applies controls according to importance and significance to quality, including appropriate considerations of NUREG-1318, "Technical Position on Items and Activities in the High-Level Waste Geologic Repository Program, Subject to Quality Assurance Requirements."
- c) To assure production of an acceptable canistered waste form.

2.2 Responsibility

2.2.1 DOE-WVPO

- a) As described in section 1.0 of this document, DOE's principal operations officer for the Project is the WVPO Director. The WVPO Director has day-to-day management overview involvement in the overall Project Quality Assurance Program and execution responsibility for the WVPO portion of the program.
- b) Responsibility for directing the WVPO program rests with the assigned WVPO Environmental, Health, Safety, and Quality Verification Program Manager. Quality Assurance Program management and administrative activities are performed primarily by the Quality Verification Manager, while other organizations within the WVPO are responsible for performing selected technically related functions that are required for proper implementation of

program activities. WVPO quality assurance implementation procedures and the requirement matrix for their application are identified in appendix A. Implementation will include:

- o An annual independent (of the Quality Assurance organization) management assessment of the adequacy and effectiveness of the WVPO portion of the Project Quality Assurance Program, including: implementing, planning, procedures, staffing, organizational structure, training, indoctrination, communications, and evaluation of conformance to the PE-04 Waste Acceptance Preliminary Specification (WAPS).
- o An annual joint DOE-ID/WVPO audit of the Project Quality Assurance Program activities performed by the WVNS site contractor. The WVPO Director and the WVPO ESH&QV Program Manager shall have the lead responsibility for planning, scope, and scheduling of this audit.
- o An ongoing day-to-day monitoring and participatory role in the implementation of West Valley site and subcontractor quality assurance activities.
- o Quarterly summaries of quality assurance management information shall be prepared and reported to the WVPO Director. This may be accomplished via monthly management reports.

- o Results of assessments, audit reports, quarterly reports, and other significant reports will be sent to DOE-ID for information.
- c) Technically related functions that are performed by the Quality Verification Manager and/or collaboratively with other organizations within the WVPO include:
- o Participation in multi-discipline audits, DOE directed Technical Review Groups (TRG) Verification activities, and readiness reviews.
 - o Review and acceptance of program plans and procedures.
 - o Review and concurrence with proposed corrective actions resulting from findings of deficiency.
 - o Ensure essential design control and document control activities.
 - o Execution of essential contracting control activities.
- d) The WVPO Director receives on-line program status in the form of existing progress and status reports and other special reports as appropriate. These reports outline the progress and status of quality assurance activities, problems and nonconformances, quality trends, and results of audits. The WVPO Director reviews these reports and initiates whatever management action is required to improve conditions and further implement the program.

2.2.2 Participants

- a) Although DOE retains the responsibility for adequacy of the overall Project Quality Assurance Program, other major participants are assigned by contract the responsibility for establishing and implementing particular program practices. Delegated program elements are discussed in section 2.3.
- b) Program participation responsibilities are organized in a three-level structure. The DOE portion of the program is the first level. The other major program participants including major subcontractors are shown at the second level. At the third level are the multitude of systems, components, materials, and service suppliers. This three-level structure is depicted by figure 1.

2.3 Requirements

2.3.1 Overall

The requirements for the overall Project Quality Assurance Program are contained in the Policy of this QAPD. Amplified requirements for waste form production are contained in the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program (RW-0214) and its appendix B, Amplification of Quality Assurance Requirements for Waste Acceptance Process Activities of High-Level Waste Form

Production. These requirements are illustrated by the identification of the program elements described in later sections of this program description.

2.3.2 Program Elements Executed by WVPO

Elements of the overall WVDP Quality Assurance Program which will be executed by WVPO are those identified as Organization, Quality Assurance Program, Instructions, Procedures and Drawings, Document Control, Corrective Action, Quality Assurance Records, Appendix 2A-3 and Audits. This is the WVPO portion of the program, and it will be executed in accordance with documented procedures, and management practices. Figure 2 illustrates the principal elements of the WVPO Quality Assurance Program, see also appendix A.

Instructions to WVPO personnel for implementation of WVPO quality assurance activities are described by ten (10) quality assurance procedures. These are:

- o Evaluation of Quality Assurance Program Plans
- o WVPO Quality Functions and Responsibilities, stop work and quality concerns
- o Preparation, Review, Approval, Issue, Change, and Distribution of Controlled Quality Assurance Documents
- o Quality Assurance Indoctrination and Training of DOE WVPO Personnel
- o Planning and Performance of QA Audits, Surveillances, Reviews, and Management Assessments.

DOE-WVPO QUALITY ASSURANCE PROGRAM ACTIVITIES

Overall Program
<ul style="list-style-type: none"> o Objectives o Responsibilities o Requirements o Control & Verification

AND

PROGRAM MANAGEMENT	
<ul style="list-style-type: none"> o Organization Structuring Documenting o Quality Assurance Program Planning Developing Staffing and Training Documenting Readiness Reviews Management Assessments Reporting o Instructions, Procedures, & Drawings Preparation and Review Issue and Distribution Change Control o Document Control Implementing Procedures 	<ul style="list-style-type: none"> o Corrective Action Review Selective Approval o Records Records Preparation Records Management o Audits Project Audits Surveillances o Appendix 2A-3, NQA-1 Qualification of Lead Auditors Education Experience Certification Evaluation

Figure 2. Major Elements of the DOE Quality Assurance Program

- o Identification and Control of WVPO Quality Assurance Records
- o Occurrence Reporting, Nonconformance Dispositions, and Corrective Actions Request, Review, and Approval
- o WVPO Trending Analysis Program
- o Root Cause Analysis and Corrective Actions
- o WVPO Annual Quality Assurance Program Assessment

The WVPO Quality Verification Manager has the assigned responsibility for establishing and maintaining the WVPO Quality Assurance procedures. Implementation of these procedures covers the performing and verification responsibilities of WVPO personnel involved in review, approval, and monitoring of participant high-level waste activities affecting quality. Specific products will include but not be limited to documented records of:

- o WVPO reviews and approvals of participant documents
- o Surveillances and audits
- o Program assessments and evaluations
- o Verification of WVPO personnel training and qualification records

2.3.3 Program Elements Delegated to Others

- a) The responsibility for implementing program elements applicable to development, design, construction, testing, and operational functions is delegated by WVPO to West Valley Nuclear Services Company, Inc. (WVNS), a subsidiary of the Westinghouse Electric Corporation. WVNS may pass along functional activities to subcontractors who


are on the WVNS Acceptable Suppliers List (ASL). Overall responsibility for adequate implementation and performance by each participant is retained by WVPO. The WVPO requires WVNS to document its program in appropriate descriptions, plans, and procedures. The WVNS program is initially evaluated and approved by DOE. Revised, updated, or new program plans and procedures are reviewed and approved by WVPO on an on-going basis. The WVNS program is monitored by WVPO on a continuing basis through review, surveillance, and audit to assess its adequacy and to verify compliance with Project requirements.

- b) Performance responsibility for the planning and conduct of readiness reviews has been delegated by WVPO to WVNS. Overall responsibility for adequacy is retained by WVPO. To implement this responsibility, WVPO will require, through approval of WVNS implementation procedures, specific WVPO role and participation in the readiness review process.
- c) Delegation of implementation responsibility for program elements including the amplified requirements of RW-0214 is accomplished through contracts. These contracts will specify applicable requirements for contractor Quality Assurance Programs including requirements that programs be established and functioning before initiation of activities affected by such programs. Where delegated responsibilities require direct inspection, testing, or other verification

activities, this involvement will be contractually documented. Tables 1 and 2 of QAPD-3 summarize delegation and participant implementation responsibilities.

- d) The responsibility for establishing and implementing control systems for nonconformances and corrective action is delegated to major Project participants. DOE WVPO, as necessary, retains authority for participation and/or approvals to assure proper disposition of significant nonconformances and effectiveness of corrective action.

2.4 Staffing and Training



WVPO personnel who are assigned responsibility for verifying that contractor performance is in accordance with requirements are selected and assigned to their area of responsibility based upon experience, education, and management's assessment of their performance capabilities. Documented position descriptions are prepared to define required education, experience, and qualification requirements, including, as appropriate, certification to applicable codes and standards. Personnel are observed for performance evaluation on a continuing basis by appropriate WVPO management. On-going training and indoctrination programs are conducted to familiarize personnel with the technical objectives of the activity being monitored, the requirements that the activity must meet, the practices and procedures to be executed in verifying conformance to requirements, and the documentation of results.

WVPO has established practices and procedures for assuring that WVPO personnel involved in the performance or acceptance of

activities affecting the quality of waste form development, qualification, and production are appropriately trained and indoctrinated as defined in ASME NQA-1, Supplement 2S-4. Qualification of WVPO personnel for inspection and testing, or nondestructive testing according to NQA-1 Supplements 2S-1 and 2S-2 and Appendix 2A-1, is not required by the WVPO portion of the overall Project Quality Assurance Program. Where WVPO takes responsibility for the performance of inspection, test, or Non Destructive Examination (NDE), appropriately qualified and certified personnel will be obtained. A WVPO procedure for auditor qualification in accordance with NQA-1 Supplement 2S-3, and appendix 2A-3 will be established; however, auditors with appropriate NQA-1 qualification and certification may be obtained from DOE-ID or contracted consultant sources.

3.0 DESIGN CONTROL

3.1 DOE Implementation

WVPO has delegated implementation responsibility for design control activities to major Project participants through contracts. The design activities are required to be in compliance with the DOE orders and documents referenced in the Policy of this QAPD. Design control practices shall provide appropriate attention to design error and deficiency control, design changes, computer software design and control, technical reviews, peer reviews, control of experimental and development activities, qualification of data, and modification control. Through contracts, WVPO retains the responsibility and authority for design control participation and selective approval of design documents.

WVPO monitors major participant design control activities related to waste form development and qualification activities,

and, by surveillance and audit, periodically reviews the participants' practices to assure proper implementation and adequacy.

3.2 Requirements of Other Participants

Each Project participant who is assigned Design Control responsibility in support of waste form development, qualification, and production activities is required by contract to implement and maintain a design control practice that meets the requirements of the documents referenced in the Policy of this QAPD. A description of overall WVDP design control practices at the contractor level is provided by QAPD-3.

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 DOE Implementation

WVPO does not normally procure items to support development and qualification but delegates to other Project participants. However, should WVPO choose to procure items or services which support development, qualification, and production activities, it will accomplish this action in accordance with the same requirements as imposed on other Project participants. WVPO will establish and implement a practice for control of procurement documents to assure that procurement functions are accomplished in accordance with the applicable contracts, codes, standards, drawings, and specifications. This practice will be carried out under written procedures which provide for coordination and implementation of procurement planning, procurement activities among Project participants, and review of procurement documents such as preprocurement plans and purchase orders and changes and/or modifications thereto by designated personnel to assure these documents are complete and correct.

WVPO monitors the procurement document control practices of major participant procurement activities related to waste form development, qualification, and production activities, and, by surveillance and audit, periodically reviews the participants practices to assure proper implementation and adequacy.

4.2 Requirements of Other Participants

Each major Project participant who is assigned procurement responsibility in support of development, qualification and production activities is required by contract to implement and maintain a procurement document control practice that meets the requirements of the documents referenced in the Policy of this QAPD. The description of WVDP procurement document control is provided by QAPD-3.

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 DOE Implementation

WVPO has a procedural control system for WVPO Quality Assurance procedures which provides instructions and procedures for WVPO activities affecting quality. These procedures assign responsibility for preparation, review, approval, release, issuance, distribution, and control of changes to these documents. See appendix A for a listing of currently identified WVPO quality assurance implementation procedures. Associated record requirements are specified by those procedures. The WVPO Quality Verification Manager participates in and monitors the WVPO execution of these procedures related to development, qualification, and production activities. Periodically the Quality Verification Manager performs surveillance or arranges for independent audit of WVPO quality assurance practices to assure implementation and adequacy.

WVPO monitors major participant procedural practices related to waste form development, qualification, and production activities and, by surveillance or audit, periodically reviews the participants' practices to assure proper implementation and adequacy.

5.2 Requirements of Other Participants

WVDP Project participants, who are assigned responsibility for performing work activities affecting quality in support of development, qualification, and production activities, are required by contract to establish and implement a practice of prescribing those activities in accordance with documented instructions, procedures, and drawings in compliance with the Quality Assurance requirements identified in the Policy of this QAPD. A description of the WVNS site contractor control practices for instructions, procedures, and drawings is provided by QAPD-3.

6.0 DOCUMENT CONTROL

6.1 DOE Implementation

WVPO has established and implemented document control practices in support of development, qualification, and production activities that fulfill the Quality Assurance Program requirements and apply to those types of documents prepared by WVPO and identified in sections 5.0, 17.0, and 18.0 of this Quality Assurance program description.

Documents originated by WVPO are processed in a controlled manner to assure the following:

- a) Uniformity of format of initial and subsequent issuances.
- b) Proper identification as to the originator and date of origin of a document, and a mechanism for verification of the authenticity of information.
- c) Positive review and approval by persons qualified to determine the correctness of the information presented and to judge its ultimate usefulness.
- d) Prompt and controlled issuance and distribution, including a mechanism for receipt control, of both the original document and subsequent revisions to prevent inadvertent use of superseded material and to assure that correct documents are available in work areas in a timely manner.
- e) Efficient revision of documents when necessary to clarify, correct, augment, or update the content of a document, while preserving the integrity of originally approved and released information.
- f) Quality Assurance requirements are properly stated, are adequate, and are included prior to implementation.

Documents to be controlled are standardized by procedure as to identification, format, and numbering. These documents are reviewed for adequacy by the originator, the Quality Verification Manager, and/or the WVPO Director, as appropriate. The originator of the controlled document and/or the ESH&QV Program Manager determines the extent of necessary reviews. The draft controlled document is routed to the appropriate reviewing personnel/organizations. Comments of

reviewing personnel are resolved prior to final approval of the document by the appropriate personnel/organizations. A record of the review sequence which has been accomplished is documented and retained. Changes or revisions are reviewed and approved by the same organizations that performed the original review and approval.

The WVPO Quality Verification Manager establishes and the WVNS Records Management Supervisor maintains a listing of WVPO controlled documents. As appropriate, controlled documents (or manuals) shall have assigned copy distribution and receipt control. This requires individually numbered copies, signed acknowledgment of transmittal receipt (including revisions), and periodic control verification. The Quality Verification Manager both participates in and monitors the execution of the document control system. Periodically the Quality Verification Manager performs surveillance or arranges for independent audit of the WVPO document control system to assure implementation and adequacy.

WVPO monitors major participant document control systems related to waste form development, qualification, and production activities, and by surveillance or audit, periodically reviews the participant systems to assure proper implementation and adequacy.

6.2 Requirements of Other Participants

Each Project participant is required to implement and maintain a document control system in support of development, qualification, and production activities that fulfills the assigned requirements required by the documents identified in the Policy of this QAPD. The WVNS site contractor document control practices are described by QAPD-3.

7.0 CONTROL OF PURCHASED ITEMS AND SERVICES

7.1 DOE Implementation

WVPO has delegated to current Project participants the responsibility for control of purchased items for development, qualification, and production activities including implementing procedures that comply with Project requirements. For procurements subject to the Federal Acquisition Regulation (FAR) and DOE Acquisition Regulation (DEAR), the contract documents are prepared and contracts placed by DOE-ID.

WVPO monitors major participant procurement practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure proper implementation and adequacy.

7.2 Requirements of Other Participants

Project participants, who are assigned responsibility for procurement of items and services in support of development, qualification, and production activities, are required, by contract, to establish and implement a system for control of those procurements in accordance with the DOE orders and other documents referenced in the Policy of this QAPD. It is required that supplier Quality Assurance Programs be reviewed and accepted before initiation of activities affecting quality. A description of the control practices of the WVNS site contractor are described by QAPD-3.

8.0 IDENTIFICATION AND CONTROL OF ITEMS

8.1 DOE Implementation

WVPO has delegated implementation responsibility for identification and control of items which support development, qualification, and operations activities to the other major Project participants through contracts.

WVPO monitors major participant identification and control of item practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure proper implementation and adequacy.

8.2 Requirements of Other Participants

Each Project participant, who has an assigned responsibility for items which support development, qualification, and production activities is required, by contract, to establish and implement identification and control practices required by DOE orders and other documents referenced in the Policy of this QAPD. Site contractor practices for identification and control of items are described by QAPD-3.

9.0 CONTROL OF PROCESSES

9.1 DOE Implementation

WVPO delegates implementation responsibility for control of special processes in support of development, qualification, and production activities to major project participants through contracts.

WVPO monitors major participant special processes control practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure proper implementation and adequacy.

9.2 Requirements of Other Participants

Project participants who are assigned responsibility for activities where special processes in support of development, qualification, and production activities are involved, are required, by contract, to establish and implement practices to assure adequate performance and control of special processes such as melting, cleaning, and sampling processes used in the design and development of experiments and their qualification. Production processes for waste form production are considered to be special processes and shall be appropriately controlled. Special process controls shall meet the requirements of the documents referenced in the Policy of this QAPD and are described by QAPD-3.

10.0 INSPECTION

10.1 DOE Implementation

WVPO delegates execution responsibility for direct inspection of items and work practices in support of development, qualification, and production activities to each major participant according to its contractually assigned scope of work. WVPO may witness inspection on a selective basis. When WVPO elects to have an agent perform inspections, the practice followed conforms to the same requirements imposed upon other participants.

WVPO monitors major Project participant inspection practices associated with waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews the participants' practices to assure proper implementation and adequacy.

10.2 Requirements of Other Participants

Each participant who is assigned responsibility for performing procurement, manufacturing, fabrication and assembly, testing, constructing, or operational activities in support of development, qualification, and production is required, by contract, to establish and implement an inspection practice of sufficient scope to be fully effective. The inspection practice will identify and verify conformance of items and services with the document specifications, instructions, procedures, and drawings for accomplishing the required activities. Inspection records will include identification of the inspection procedure, characteristics inspected, acceptance criteria, equipment used for inspection, and specific expertise used. The documented inspection practices shall meet the requirements of the documents referenced in the Policy of this QAPD, and are described by QAPD-3.

11.0 TEST CONTROL

11.1 DOE Implementation

WVPO delegates implementation responsibility for testing and test control practices in support of development, qualification, and production activities to major participants by contracts. WVPO witnesses tests by the major Project participants on a

selective basis and may, on limited occasions, require independent tests. When WVPO elects to have an agent perform tests, the test control practices will conform to the same requirements imposed upon other participants.

WVPO monitors major Project participant test control practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure proper implementation and adequacy.

11.2 Requirements of Other Participants

Each participant who is assigned responsibilities for performing manufacturing, fabrication, and assembly activities or operational activities in support of development, qualification and production is required by contract to establish, as applicable, proof tests, preoperational tests, and product certification tests. Potential sources of uncertainty and error shall be identified and controlled. Precision and accuracy considerations shall be identified in test procedures. The testing activities shall meet the requirements of the documents referenced in the Policy of this QAPD, and are described by QAPD-3.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 DOE Implementation

WVPO has delegated implementation responsibility for control of measuring and test equipment which supports development, qualification, and production activities to the other major Project participants through contracts. In those instances

where WVPO elects to have an agent perform inspections, examinations, or tests, the measuring and test equipment is controlled in accordance with those requirements imposed upon the participants.

WVPO monitors major Project participant measuring and test equipment control practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure proper implementation and adequacy.

12.2 Requirements of Other Participants

Project participants who are assigned responsibility for performing inspections, examinations, or tests which support development, qualification, and production activities are required by contract to establish and implement a system for calibration and control of measuring and test equipment that meets the requirements of the documents referenced in the Policy of this QAPD. Calibration standards shall be equal to or have greater accuracy than the equipment being calibrated, unless limited by state of the art. Practices for control of measuring and test equipment are described in QAPD-3.

13.0 HANDLING, STORAGE AND SHIPPING

13.1 DOE Implementation

WVPO has delegated implementation responsibility for handling, storage, and shipping practices which support development, qualification, and production activities to the other major Project participants through contracts.

WVPO monitors major Project participant handling, storage, and shipping practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews participant practices to assure implementation and adequacy.

13.2 Requirements of Other Participants

Each participant who is assigned responsibility for manufacturing, fabrication or assembly which support development, qualification, and production activities is required by contract to establish and implement practices for handling, storage, and shipping of items. These practices shall meet the requirements of the documents referenced in the Policy of this QAPD. A description of the practices for handling, storage, and shipping is provided by QAPD-3. Archival samples, when required for waste form qualification or for certification of canistered waste forms, shall be controlled in accordance with these practices.

14.0 INSPECTION, TEST, AND OPERATING STATUS

14.1 DOE Implementation

WVPO delegates implementation responsibility for inspection, test and operating status measures which support development, qualification, and production activities to the other major Project participants through contracts.

WVPO monitors major participant practices related to waste form development, qualification, and production activities for indicating inspection, test, and operating status, and, by surveillance or audit, periodically reviews participant practices to assure implementation and adequacy.

14.2 Requirements of Other Participants

Participants who are assigned responsibility for manufacturing, fabrication, and assembly; or operation (operation of test activities) activities which support development, qualification, and production activities are required to establish and implement practices to indicate the status of inspection and test performed upon individual items throughout development, qualification and operations activities. They also are required to establish and implement practices to indicate the status of inspections and tests performed upon individual items throughout development and qualification activities by using such markings as stamps, tags, labels, routing cards, or other suitable means. These practices shall meet the requirements of the documents referenced in the Policy of this QAPD and are described by QAPD-3.

15.0 CONTROL OF NONCONFORMING ITEMS

15.1 DOE Implementation

WVPO has delegated direct responsibility for control, review, and disposition of nonconforming items or activities which support development, qualification, and production activities to other major Project participants through contracts. Delegation requires that disposition of significant nonconformances have WVPO approval. Contracts shall require that WVPO review and approval authorities be specified in the contractor's nonconformance control procedures. WVPO also retains authority to identify and require that WVPO identified nonconformances be entered into the participant contractor's nonconformance control system. WVPO oversight of nonconformance control is described by procedure WVPO-AP-645.

WVPO monitors the major Project participant nonconformance control practices related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews major Project participant nonconformance practices to assure implementation and adequacy.

15.2 Requirements of Other Participants

Each participant who is assigned responsibility for procurement, manufacturing, fabrication and assembly, or operational activities is required by contract to establish and implement a practice for the control of nonconforming items or activities in support of waste form development, qualification, and production activities. These practices shall be in compliance with the documents referenced in the Policy of this QAPD and are described at the site contractor level by QAPD-3.

16.0 CORRECTIVE ACTION

16.1 DOE Implementation

WVPO has established procedures for the identification and correction of the causes of significant conditions adverse to quality identified through internal WVPO audits and surveillances or external audits and surveillances performed on the WVPO. Procedural instructions and policy guidance provide criteria for determining the existence of significant conditions adverse to quality. The Quality Verification Manager (QVM) provides follow-up to verify timely and proper implementation of corrective action.

WVPO procedures govern the reporting of investigation and analysis of significant conditions adverse to quality to identify adverse quality trends and help determine the root cause(s), identify and establish remedial actions to correct the problem and prevent its recurrence. Quality trends and results of remedial actions shall be reported to WVPO Program Managers responsible for corrective action and appropriate WVPO upper-management for review and assessment.

The WVPO Quality Verification Manager (QVM) collects key information from WVPO audits, surveillances and assessments reports and inputs this information into a data base. This information is analyzed by the WVPO QVM to identify adverse quality trends. Analysis is performed so as to ensure prompt identification of adverse quality trends. Using the data base, evaluations are performed to determine systematic root cause(s) and establish a course of action for correction.

Program status and the status of significant conditions adverse to quality will be reported to appropriate levels of WVPO and DOE-ID management.

WVPO has delegated implementation responsibility for corrective action to other major Project participants through contracts. Corrective action is required for conditions adverse to quality such as failures, nonconformances, malfunctions, deficiencies, deviations, and defective material and equipment that are required to support development, qualification, and production of an acceptable canistered waste form product. Significant conditions adverse to quality identified by DOE overview or audits of the participant activities will require corrective action by the participant. Contracts shall require that WVPO review and approval authorities be specified in WVPO-approved contractor corrective action procedures.

WVPO monitors major participant corrective action systems related to waste form development, qualification, and production activities, and, by surveillance or audit, periodically reviews the participant systems to assure implementation and adequacy.

16.2 Requirements of Other Participants

Each participant is required by contract to establish and implement a corrective action system which supports waste form development, qualification, and production activities that meet the requirements of the documents referenced in the Policy of this QAPD. Quality information shall be promptly analyzed and examined for adverse quality trends. Trends analysis shall identify adverse quality trends. Corrective action practices shall include criteria for determining existence of significant conditions adverse to quality, and shall incorporate appropriate procedures for identification of root causes. Corrective action documentation shall be provided to appropriate DOE and contractor management, and shall require appropriate quality assurance organizational concurrence with proposed actions. A description of the WVNS site contractor corrective action practices is provided by QAPD-3.

17.0 QUALITY ASSURANCE RECORDS

17.1 DOE Implementation

WVPO has established a quality assurance records system that provides for the collection, storage, and maintenance of DOE-generated records in support of WVPO, DOE-ID, and DOE-EM

overview, surveillance and audit of WVDP waste form development, qualification, and production activities in accordance with approved records management procedures. Responsibility for assuring that DOE-generated Quality Assurance records are correctly identified and appropriately validated is assigned to the WVPO Quality Verification Manager.

WVPO has delegated implementation responsibility for records preparation, collection, storage, and maintenance related to development, qualification, and production activities to WVNS. Overall responsibility for adequacy is retained by WVPO. WVPO has also delegated to the WVNS site contractor the responsibility for establishing an acceptable records management and retention system that will include contractor and DOE-generated records supporting verification of acceptable waste form development, qualification, and production activities.

The WVPO quality assurance records system contains the following additional provisions for waste form acceptance process activities of high-level waste form production:

- a) DOE-EM, DOE-ID, and WVPO generated documentation that supports demonstration of canistered waste form compliance with the WAPS PE-04 and the RW-0214 Quality Assurance Requirements Document for High-Level Waste Form Production will be maintained as quality records.
- b) DOE-EM, DOE-ID, and WVPO-generated documentation providing evidence of satisfactory implementation of the Waste Form Compliance Plan (WCP) and support to the Waste Form Qualification Report (WQR) is collected and transferred, by WVPO, to the central Project Master Records Center (MRC) as

lifetime quality records. Copies of these records are made available to the federal repository Operator at the time the repository is ready to begin accepting canistered waste forms from the waste form producer. Other DOE-EM, DOE-ID, and WVPO record documentation generated during preparation and implementation of the WCP or the WQR will be collected and maintained by the MRC Project records management system as nonpermanent quality records.

WVPO participates in and monitors the implementation of the major Project participants record systems as related to waste form development, qualification, and production activities. Periodically WVPO performs surveillance, audits, or arranges for independent audit of the records systems to assure implementation and adequacy. Production record documentation traceable to the canister shall be lifetime records that will be transferred to the Federal Repository Operator. WVPO record reviews will include assurance that product certification and product production records are identified, collected, maintained and traceable in accordance with the Waste Acceptance Specification (WAS), WCP, and WQR requirements. Appropriate compliance with the requirements of DOE/EM/WO/04 Rev. 0, Vitrification Projects Records Management Policies and Requirements including Appendix C, and as specified by DOE System 80, will be monitored by WVPO.

17.2 Requirements of Other Participants

Each major Project participant is required by contract to maintain a Quality Assurance records system which supports development, qualification, and production activities in compliance with the documents referenced in the Policy of this QAPD. A description of the overall records control and records management system is provided by QAPD-3.

18.0 AUDITS AND SURVEILLANCE

18.1 DOE Implementation

18.1.1 Audits

WVPO has established a quality assurance audit practice which supports waste form development, qualification, and production activities. The audit program established in collaboration with DOE-ID, will provide a comprehensive independent verification and evaluation, both internally and externally, of the status and adequacy of the overall Project Quality Assurance Program methods, quality-related procedures and activities. This practice includes the WVPO/DOE-ID program as well as the programs of the other major program participants and their suppliers. Audits are designed to assure that procedures and activities are meaningful and comply with the overall Project Quality Assurance Program requirements.

WVPO or WVPO/DOE-ID internal and external audits are planned and scheduled to support the development, qualification, and production of an acceptable canistered high-level waste form product and are initiated early enough to assure effective quality assurance practices during design, procurement, manufacturing, fabrication and assembly, and operational activities. Audits are planned in collaboration with DOE-ID on an annual basis, with the plan and schedule prepared, updated, and issued quarterly by WVPO. Audits are planned to include evaluation of internal practices

of the WVPO program, but are directed toward the practices of each of the major Project participants. Audit planning for each major participant program is designed to include an objective evaluation of quality-related practices, procedures and instructions; the effectiveness of implementation; and the conformance with policy directives. Audit teams will include appropriately trained and qualified representatives in the technology being audited. These audits include the evaluation of work areas, activities (including personnel training and indoctrination), processes, and items. They also include review of documents and records to ensure that the Quality Assurance Programs are effective and properly implemented. In each major participant program, identified elements of interface control are evaluated with respect to each participant's internal activities as well as interfacing activities with customer and subcontractors. Annual audits of WVPO and WVNS will be supplemented by additional audits where the need becomes evident.

An audit plan is prepared for each audit and audits are conducted in accordance with written procedures and checklists. A pre-audit meeting with responsible management personnel will be held before the audit to review scope, purpose, and schedule of the audit and at the conclusion, to review audit findings with management having responsibility in the area audited. The need for any corrective actions is established and the audit results are documented and transmitted by letter to the audited organization in a formal report. Each audit is conducted by personnel who do not have direct responsibilities in the areas being audited.

The WVPO Quality Verification Manager shall have lead responsibility for performing or directing necessary activities to assure that audits have:

- o adequate technical content,
- o appropriate technical competence of audit team,
- o sufficient analysis of audit data,
- o necessary follow-up for completion and adequacy of corrective actions, and
- o preparation and submittal of audit records to the Project records management system for storage and safekeeping.

Audit results are to be reported to responsible management, including WVPO, DOE-ID, and DOE-EM.

Responsible auditee management is required to identify cause and take the necessary action to correct deficiencies revealed by the audit and to provide the auditing organization with a statement of proposed and completed corrective action. Deficient areas are monitored and, when necessary, reaudited until corrections have been accomplished.

WVPO or WVPO/DOE-ID audits are performed in those areas of the overall Project Quality Assurance Program where the requirements of ASME NQA-1 and RW-0214 are being implemented. Each major Project participant is required to prepare a matrix showing which procedures are used for implementation of each of the nineteen (19) Basic and Supplementary requirements of ASME NQA-1 plus RW-0214 requirements. The activities and practices which carry out these procedures are audited on a

prescheduled basis. See appendix A for the matrix applying to the WVPO program.

18.1.2 Surveillance

As required by RW-0214, WVPO performs planned surveillances of participant activities affecting waste form quality. The WVPO procedure for surveillance requires planning and documentation. Surveillances are performed by personnel who are knowledgeable in the activities, but are not directly responsible for performing the work, and will use written checklists whenever practicable. Significant deficiencies, nonconformances, and potential quality problems are documented and reported by a written surveillance report. The report will describe the activities under surveillance, identify persons conducting surveillance, identify persons contacted, identify criteria for acceptability, summarize surveillance results, and describe any immediate corrective actions. Requested nonconformance disposition and/or corrective action will be required to be conducted in accordance with WVPO approved procedures. See sections 15.0 and 16.0 of this document.

18.2 Requirements of Other Participants

Each major Project participant is required by contract to establish and implement an audit and surveillance practice which supports waste form development, qualification, and production activities and satisfies the documented quality assurance requirements referenced in the Policy of this QAPD. The WVNS site contractor audit program is described by QAPD-3.

19.0 COMPUTER SOFTWARE

19.1 DOE Implementation

WVPO has delegated responsibility for control of computer software control to major project participants through contracts. Computer software control is required to be in compliance with the DOE Orders and documents referenced in the Policy of this QAPD.

WVPO monitors major participant computer software control for activities related to waste form development, qualifications, and production activities. Monitoring is performed by surveillance and audit.

19.2 Requirements for Other Participants

Project participants assigned responsibility for waste form development, qualification, or production activities are required by contract to implement and maintain required computer software control. Description of computer software control is provided by Section 19.0 of QAPD-3.

APPENDIX A

WPVO Implementing Procedures

WVPO QA Program Procedures

WVPO-QP-639 WVPO Quality Functions and Responsibilities, Stop Work and Quality Concerns

WVPO-QP-640 Planning and Performance of Quality Assurance Audits, Surveillances, Reviews, and Management Assessments

WVPO-QP-642 Preparation, Review, Approval, Issue, Change, and Distribution of Controlled Quality Assurance Documents

WVPO-QP-643 Quality Assurance Indoctrination and Training of DOE WVPO Personnel

WVPO-QP-644 Identification and Control of DOE-Generated WVDP Quality Assurance Records

WVPO-QP-645 Occurrence Reporting, Nonconformance Dispositions, and Corrective Actions Request, Review and Approval

WVPO-QP-646 WVPO Trending Analysis Program

WVPO-QP-647 Root Cause Analysis and Corrective Actions

WVPO-QP-662 WVPO Annual Program Assessment

WVPO QA Program Requirements/Procedure Matrix

Requirement

Implementing Procedures

NOA-1

1. Organization	WVPO-QP-639
2. QA Program	WVPO-QP-639, WVPO-QP-640, WVPO-QP-662, WVPO-QP-643, and QAPD-2
5. Instructions and Procedures	WVPO-QP-642
6. Document Control	WVPO-QP-642, WVPO-QP-644
16. Corrective Action	WVPO-QP-645, WVPO-QP-646, WVPO-QP-647
17. QA Records	WVPO-QP-644
18. Audits	WVPO-QP-640

UNCONTROLLED

WVDP-074
QAPD-3
Rev. 2

POLICY

At West Valley Nuclear Services, Co., Inc. (WVNS), quality assurance is applied commensurate with the complexity of the product/service and consequence of failure. Controls are based on item classification which range from items important to worker and public safety to commercial-grade items. The controls are in accordance with the requirements of RW-0214 and are consistent with the provisions of 10 CFR 50, appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants," and ASME NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities." Classification and levels of control are applied as appropriate to assure that each task is done right the first time to meet requirements in a cost-effective manner.

A preventive Quality Assurance Program shall be reviewed and periodically maintained and verified to assure that WVNS' products and services for high-level waste form qualification and production meet requirements, are fit for use, and satisfy the customer's contract requirements.

The Quality Assurance Program, as documented in the WVNS Quality Management Manual, shall cover functional activities involved in production of WVNS' items, products, and services. The Program shall provide for prevention of errors, as well as for detection and correction of deficient conditions. The Program shall include operating elements and procedures that comply with legal, regulatory, contractual, and corporate requirements related to quality.

The Quality Management Manual shall be responsive to DOE Order 5700.6C, "Quality Assurance." The Quality Management Manual shall implement, through selective and judicious application, the requirements of ASME NQA-1 and the requirements of RW-0214.

UNCONTROLLED

Responsibilities and authority for execution of this policy are detailed in this document and the referenced procedures. The overall responsibilities and procedures are for more specific elements of the WVNS Quality Assurance Program and delineated in WVNS' Quality Management Manual.

Compliance with the requirements of the Quality Assurance Program is mandatory for all WVNS personnel.



W. G. Foulson, President and General Manager
West Valley Nuclear Services Co., Inc.

UNCONTROLLED

WVDP-074
QAPD-3
Rev. 2

QAPD-3 TABLE OF CONTENTS

<u>QAPD-3</u>	<u>SUBJECT</u>	<u>PAGE</u>
0.0	INTRODUCTION.....	96
	0.0.1 Scope.....	96
	0.0.2 Mission.....	96
	0.0.3 Strategy.....	99
	0.0.4 Requirements.....	100
	0.0.5 Application.....	100
	0.0.6 Terms and Definitions.....	102
0.1	WVNS QUALITY ASSURANCE PROGRAM.....	102
	0.1.1 Background.....	102
	0.1.2 Current Program.....	103
1.0	ORGANIZATION.....	105
2.0	QUALITY ASSURANCE PROGRAM.....	112
3.0	DESIGN CONTROL.....	121
4.0	PROCUREMENT DOCUMENT CONTROL.....	130
5.0	INSTRUCTIONS, PROCEDURES, AND DRAWINGS.....	132
6.0	DOCUMENT CONTROL.....	133
7.0	CONTROL OF PURCHASED ITEMS AND SERVICES.....	134
8.0	IDENTIFICATION AND CONTROL OF ITEMS	137
9.0	CONTROL OF PROCESSES.....	138
10.0	INSPECTION.....	140
11.0	TEST CONTROL.....	143
12.0	CONTROL OF MEASURING AND TEST EQUIPMENT.....	145
13.0	HANDLING, STORAGE, AND SHIPPING.....	146
14.0	INSPECTION, TEST, AND OPERATING STATUS.....	147
15.0	CONTROL OF NONCONFORMING ITEMS.....	148
16.0	CORRECTIVE ACTION.....	150
17.0	QUALITY ASSURANCE RECORDS.....	151
18.0	AUDITS.....	154
19.0	COMPUTER SOFTWARE.....	156
	Appendix A - Matrix Table of Implementing Procedures.....	158

UNCONTROLLED

WVDP-074
QAPD-3
Rev. 2

QAPD-3 TABLE OF CONTENTS (CONTINUED)

<u>ITEM</u>	<u>SUBJECT</u>	<u>PAGE</u>
Figure 1	West Valley Demonstration Project Organization Chart	97
Figure 2	Waste Acceptance Process.....	98
Figure 3	WVNS Organization Chart.....	108
Figure 4	Participants Chart.....	109
Table 1	West Valley Producers RW-0214/NQA-1 Activity Table...	106
Table 2	West Valley Producers Activity Table.....	107

UNCONTROLLED

WVDP-074
QAPD-3
Rev. 2

WEST VALLEY NUCLEAR SERVICES (WVNS) QUALITY ASSURANCE PROGRAM DESCRIPTION FOR HIGH-LEVEL CANISTERED WASTE FORM PRODUCTION

0.0 INTRODUCTION

0.0.1 Scope

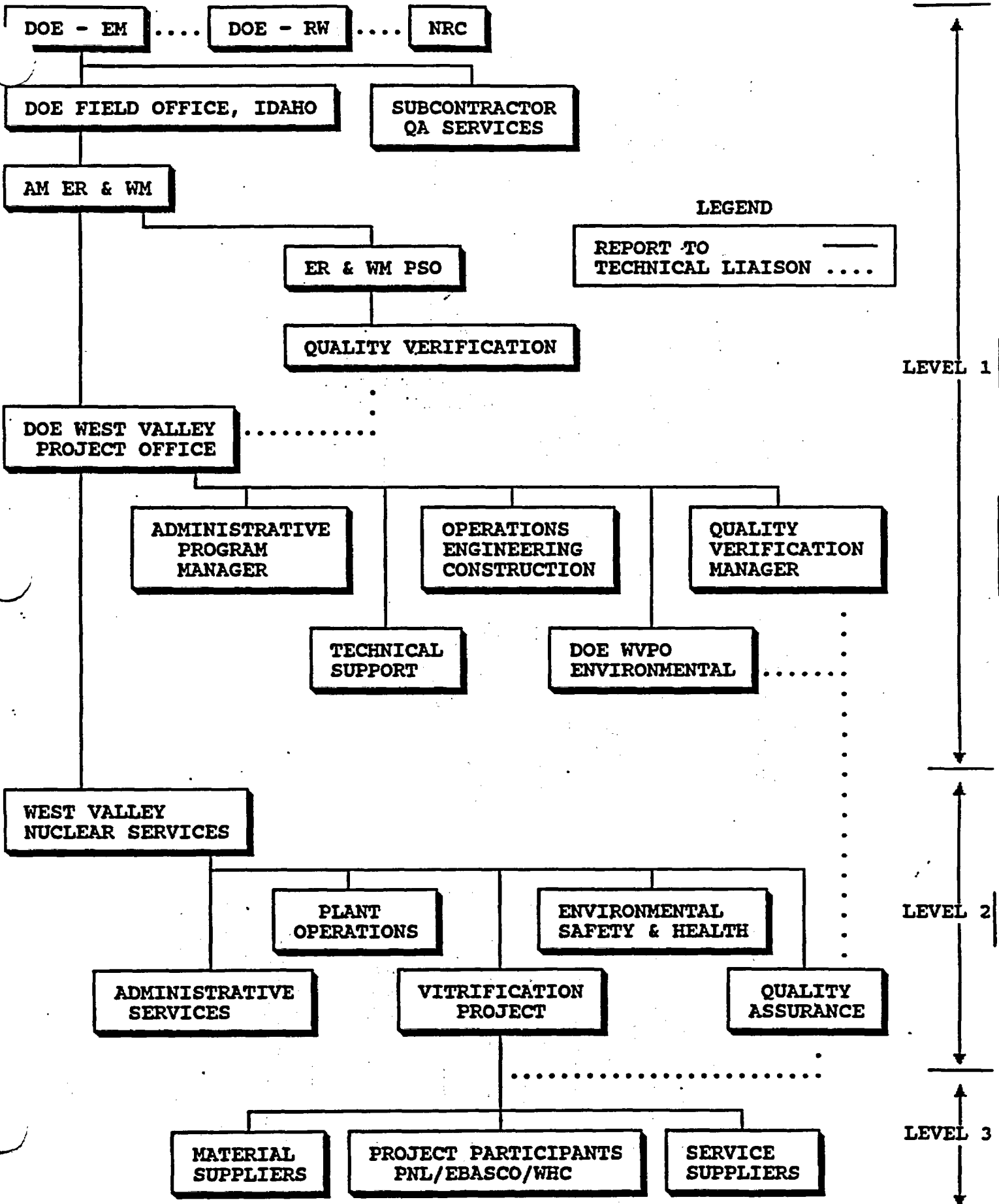
This QAPD-3 section of the WVDP Quality Assurance Program Description describes the WVNS Quality Assurance Program that applies to Waste Acceptance Process Activities of high-level waste form production at the WVDP, including how the WVNS Quality Assurance Program relates to other Quality Assurance Programs within the WVDP waste form producer organization and how it interacts with the Quality Assurance Programs of the other participants. This document also describes the role of the WVNS Quality Assurance Program in fulfilling the Project mission, and how it meets the specifications contained in the requirements documents. The relationship of waste producer organizational elements to each other and to other accountable organizations (participants) is shown in figure 1.

0.0.2 Mission

The Project mission is to develop, qualify, and produce stabilized radioactive waste forms suitable for deposit in a licensed federal repository. The specifications for acceptable high-level waste forms are delineated in the Waste Acceptance Preliminary Specifications (WAPS), PE-04.

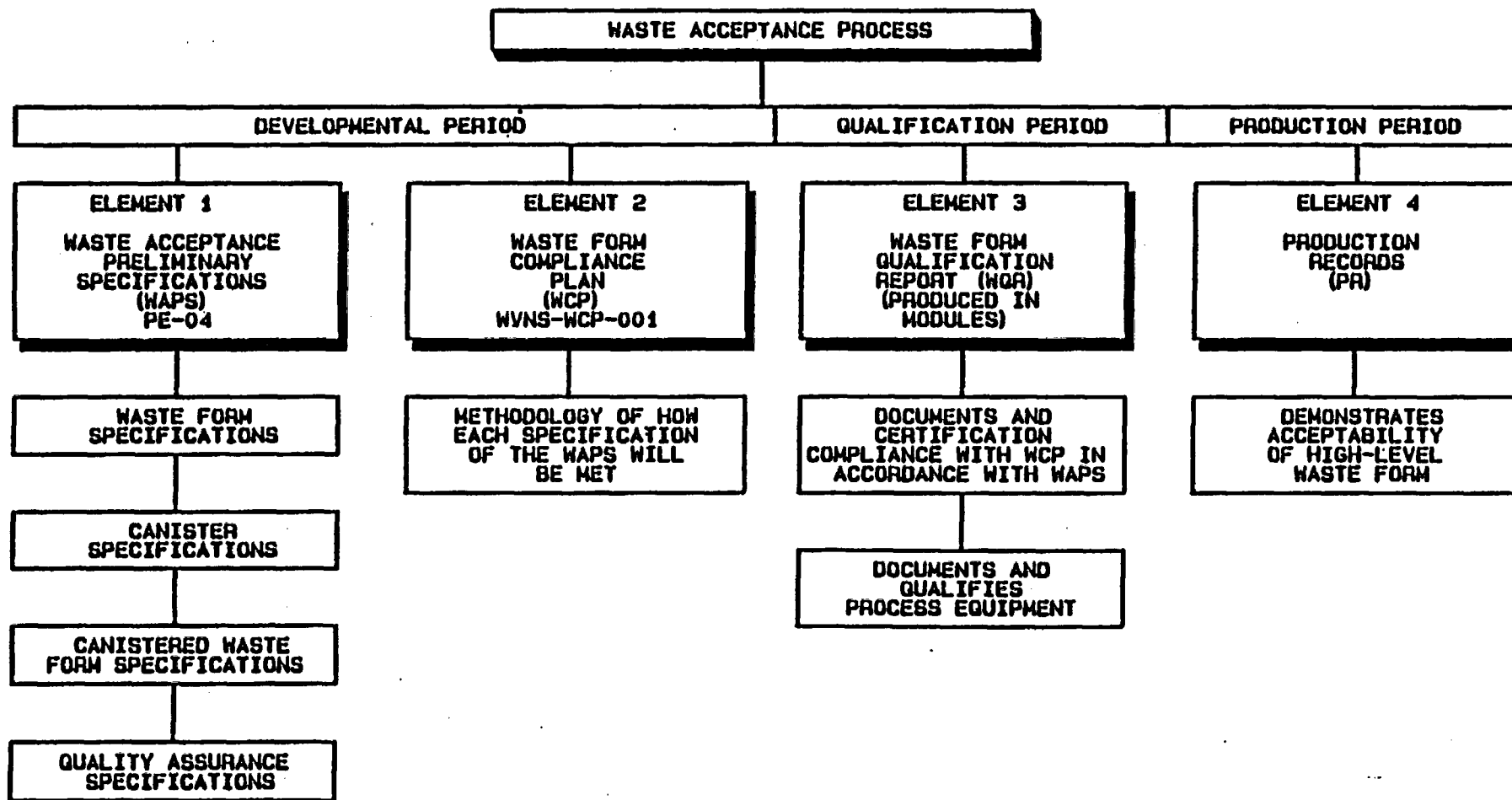
WEST VALLEY DEMONSTRATION PROJECT ORGANIZATION CHART

WVDP-0/4
QAPD-3
Rev. 2



RJL0057D

Figure 1



0.0.3 Strategy

The strategy for realization of the Project mission divides the Project activities into three periods and four elements, known collectively as the Waste Acceptance Process. These are shown in figure 2 and summarized below:

1. Developmental Period - The developmental period includes the essential research and development activities performed by accountable organizations to produce element #1: a viable Waste Acceptance Preliminary Specifications (WAPS), PE-04. This period also includes the preparation of element #2: a Waste Form Compliance Plan (WCP), WVNS-WCP-001, by the waste form producer.
2. Qualification Period - The qualification period encompasses the essential test and verification activities that will culminate in element #3 which is the Waste Form Qualification Report (WQR). The WQR will provide documented evidence that the canistered waste form meets the specifications of the WAPS and will certify compliance with the WCP.
3. Production Period - The production period will begin with the production of the first high-level waste canister and will finish when the last high-level waste canister is accepted and placed in interim storage. The basis for acceptance of the waste forms is the Production Records (PR), element #4.

The strategy includes provisions to assure that all Waste Acceptance Process Activities are performed according to an effective Quality Assurance Program. WVNS implementation of

requirements as set forth in RW-0214, Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program are in accordance with the direction and delegation from WVPO, as described by QAPD-2.

0.0.4 Requirements

Requirements for the Quality Assurance Program are the DOE Order for "Quality Assurance"; and ASME NQA-1, (NQA-1) "Quality Assurance Program Requirements for Nuclear Facilities". These requirements are further amplified by RW-0214 to provide the basis for waste form producer quality assurance programs that can be used to support the licensing application for the federal repository.

Although documenting the Project QAPDs is required in preparation for the production period, the WVNS Quality Assurance Program has been implemented far enough in advance of production to assure that Waste Acceptance Process activities, such as testing and analysis occurring during the developmental and qualification periods, meet the requirements of the WAPS.

0.0.5 Application

The elements of the overall Project Quality Assurance Program being performed by WVNS are those identified by RW-0214 and NQA-1 as the 19 criteria:

1. Organization
2. Quality Assurance Program
3. Design Control
4. Procurement Document Control
5. Instructions, Procedures, and Drawings

6. Document Control
7. Control of Purchased Items and Services
8. Identification and Control of Items
9. Control of Processes
10. Inspection
11. Test Control
12. Control of Measuring and Test Equipment
13. Handling, Storage, and Shipping
14. Inspection, Test, and Operating Status
15. Control of Nonconforming Items
16. Corrective Action
17. Quality Assurance Records
18. Audits
19. Computer Software

and the amplified requirements of RW-0214 as applied to the 19 criteria. Further, these Quality Assurance Program elements shall be applied to all essential high level Waste Acceptance Process activities through which documentation and data are collected and prepared to support compliance with the WAPS. Examples are testing and analysis activities associated with research and development that is essential to qualification of the waste form; including control of materials, equipment, facilities, processes, and processing activities that are essential to the certification of canistered waste. Activities covered by the Program include both the performing functions of achieving quality and the quality assurance functions. The quality assurance functions are those of: a) assuring that an appropriate Quality Assurance Program is established and effectively executed; and b) verifying, such as by checking, auditing, surveillance, and inspection, that activities affecting quality achievement (including safety functions) have been correctly performed.

0.0.6 Terms and Definitions

For a glossary of terms used in this document, refer to appendix II. The definition of acronyms used in this document are displayed in appendix III.

0.1 WVNS QUALITY ASSURANCE PROGRAM

0.1.1 Background

The West Valley Demonstration Project Act was passed in 1980 for the purpose of decommissioning the abandoned West Valley Nuclear Fuel Reprocessing Plant and cleaning up its radioactive waste. This includes the conversion of high-level nuclear waste to a durable borosilicate glass for transport to a federal repository. To control early decommissioning activities at the West Valley Demonstration Project (WVDP), the WVNS Quality Assurance Program was implemented at the WVDP in 1982. It was written to satisfy ANSI/ASME NQA-1, 1979, which was the contemporary consensus standard. Since then it has been periodically reviewed and upgraded to meet amplified requirements. Milestones concurrent and subsequent to WVNS' Quality Assurance Program implementation at the WVDP are listed below.

1. The enactment in 1982 of the Nuclear Waste Policy Act (NWPA) which mandates that all high-level nuclear waste will be sent to a federal repository for disposal.
2. Following President Reagan's ratification in 1985 of the decision to send defense high-level waste to a civilian repository, the DOE devised its strategy the--Waste

Acceptance Process--to assure that high-level canistered waste products are acceptable to both a federal repository operator and regulatory authorities. This landmark decision led to the release of:

- a) the preliminary version of the Waste Acceptance Preliminary Specifications (WAPS), PE-04, in April 1987, and,
 - b) in response to the WAPS, the Waste Compliance Plan (WCP), WVNS-WCP-001, in April 1989.
3. In response to RW-0214, the WVNS Quality Assurance Program has been updated to meet the amplified requirements that are applicable to Waste Acceptance Process Activities for production of high-level waste canisters at the WVDP.

0.1.2 Current Program

The WVNS Quality Assurance Program at the WVDP implements ASME NQA-1-1989 and supplements, and is substantially the same as described in section 2.0 of this document.

The core document for the WVNS program is the Quality Management Manual (QMM). Its purpose is to iterate the requirements for program quality assurance and to identify the internal organizations responsible for implementing them. Each section of the QMM is approved by the President of WVNS. Subsequently, it is approved by WVPO and DOE-ID.

The WVNS Quality Management Manual sections, and the WVNS organizational procedures implement the present requirements for the Quality Assurance Programs for Waste Acceptance Process Activities.

The WVNS Quality Assurance Program described in the following sections is based on the requirements, supplements, and applicable appendices of NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities"; the amplified requirements of RW-0214, "Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program and documents referenced in the policy of the QAPD. Specific RW-0214 amplifications applicable to waste form production are provided by appendix B of RW-0214. In addition, the WVNS Quality Assurance Program complies with the applicable portions of 10 CFR 60, subpart G, which implements the criteria of 10 CFR 50, appendix B.

The Quality Assurance Program description is arranged into 19 elements, based on the criteria of 10 CFR 50, appendix B, and of NQA-1. Each amplified requirement of RW-0214 is included in the criterion best suited to its topic. The requirements and supplemental requirements are individually addressed in the 19 subsections that follow and they are shown in tables 1 and 2. NQA-1 requirements are shown in table 1. RW-0214 appendix B requirements are shown in table 2. The tables show how the major participants' Quality Assurance Programs: a) implement the requirements at their level; b) flow-down the requirements to the next level; and c) perform overview of the elements at lower levels.

1.0 ORGANIZATION

1.1 WVNS is organizationally structured to be both sensitive and responsive to its role as site contractor (SC) at the West Valley Demonstration Project. The intent of the organizational arrangement is to optimize the conduct of the responsibilities and duties delegated to WVNS by DOE through the WVPO. The authority delegated to WVNS is a charter to develop and implement an effective Quality Assurance Program that will assure success of the Project's mission, and to execute Waste Acceptance Process activities in accordance with the Quality Assurance Program. The authority and duties of persons and organizations performing activities affecting Waste Acceptance Process activities for high-level waste form production are established and delineated in program documents.

1.2 The portion of the WVDP organization described herein is shown as level 2 in figure 1, and in greater detail in figure 3. The Project participants depicted at level 3 in figure 1 are also discussed here, because of Project responsibilities and activities that have been delegated to them. Major level 3 participants who have been required to have WVNS approved Quality Assurance Programs are identified in figure 4. Other participants, including suppliers, consultants, subcontractors, and laboratories are a part of the overall WVNS program by virtue of WVNS delegated Quality Assurance Program elements. All such delegated Quality Assurance functions are identified by appropriate contractual requirements with accountability for acceptable implementation retained by WVNS. WVNS performs initial approval and scheduled, periodic overview of the organizational structures and Quality Assurance Programs of all level 3 participants by audit, surveillance, or other appropriate methods.

TABLE 1

WEST VALLEY PRODUCERS RW-0214/NQA-1 ACTIVITY TABLE

RW-0214/NQA-1			
Element and Supplements	DOE-ID	WVPO	WVNS
1. Organization	I D O	I D O	I D O
2. Program (including QAPD)	I D O	I D O	I D O
3. Design Control	D O	D O	I D O
4. Procurement Document Control	D O	D O	I D O
5. Procedures and Drawings	I D O	I D O	I D O
6. Document Control	I D O	I D O	I D O
7. Control of Purchased Items	D O	D O	I D O
8. Identification of Items	D O	D O	I D O
9. Process Control	D O	D O	I D O
10. Inspection	D O	D O	I D O
11. Test Control	D O	D O	I D O
12. Measuring and Test Equipment	D O	D O	I D O
13. Storage/Shipping	D O	D O	I D O
14. Operating Status	D O	D O	I D O
15. Control of Nonconforming Items	D O	D O	I D O
16. Corrective Actions	D O	I D O	I D O
17. Quality Assurance Records	I D O	I D O	I D O
18. Audits	I D O	I D O	I D O
19. Computer Software	D O	D O	I D O
NQA-1 Appendix 2A-1	D O	D O	I D O
NQA-1 Appendix 2A-3	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

TABLE 2

RW-0214 APPENDIX B

WEST VALLEY PRODUCERS ACTIVITY TABLE

RW-0214 Appendix B	DOE-ID	WVPO	WVNS
2.1 Method Description	D O	D O	I D O
2.2 Readiness Reviews	D O	I D O	I D O
2.3 Graded Quality Assurance	D O	D O	I D O
2.4 Qualification of Personnel	D O	I D O	I D O
2.5 Management Assessments	I D O	I D O	I
3.1 Control of Experiments	D O	D O	I
13.1.5 Modification Control	D O	D O	I D O
3.2 Computer Software	D O	D O	I D O
9.0 Control of Process	D O	D O	I D O
13.1 Archival of Samples	D O	D O	I D O
9.0 Control of Processes	D O	D O	I D O
13.1 Archival of Samples	D O	D O	I D O
17.0 Records	D O	I D O	I D O
18.0 Audits	I D O	I D O	I D O

I - Implementation of Element by Participant's Program

D - Delegation of Element to next Participant's Level (EM->ID, etc.)

O - Oversight of Element at all lower Participant Levels

WVNS ORGANIZATIONAL CHART

WVDP-
QAPD-
Rev. 2

LEGEND

Report To —

Technical Liaison ...

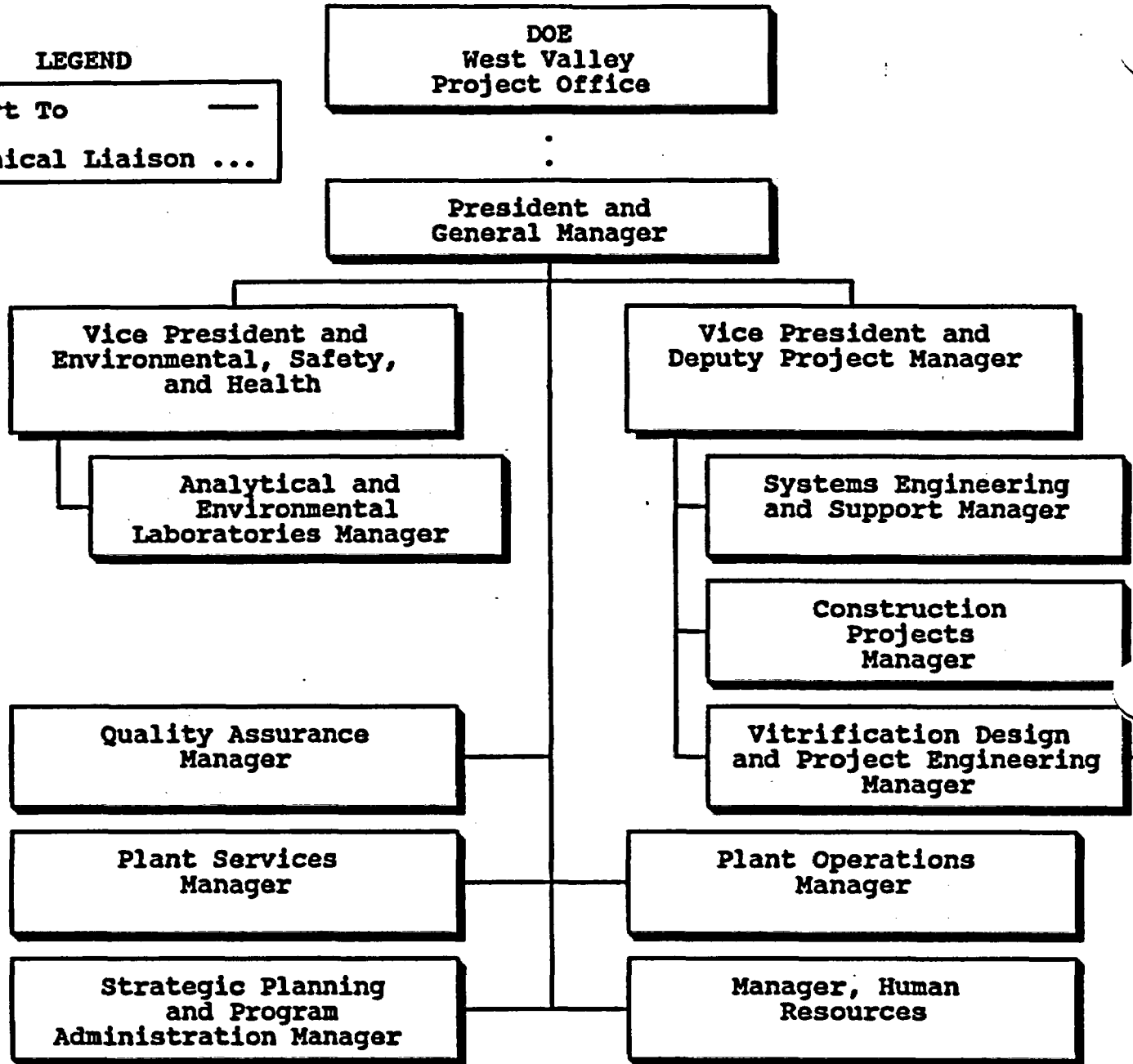
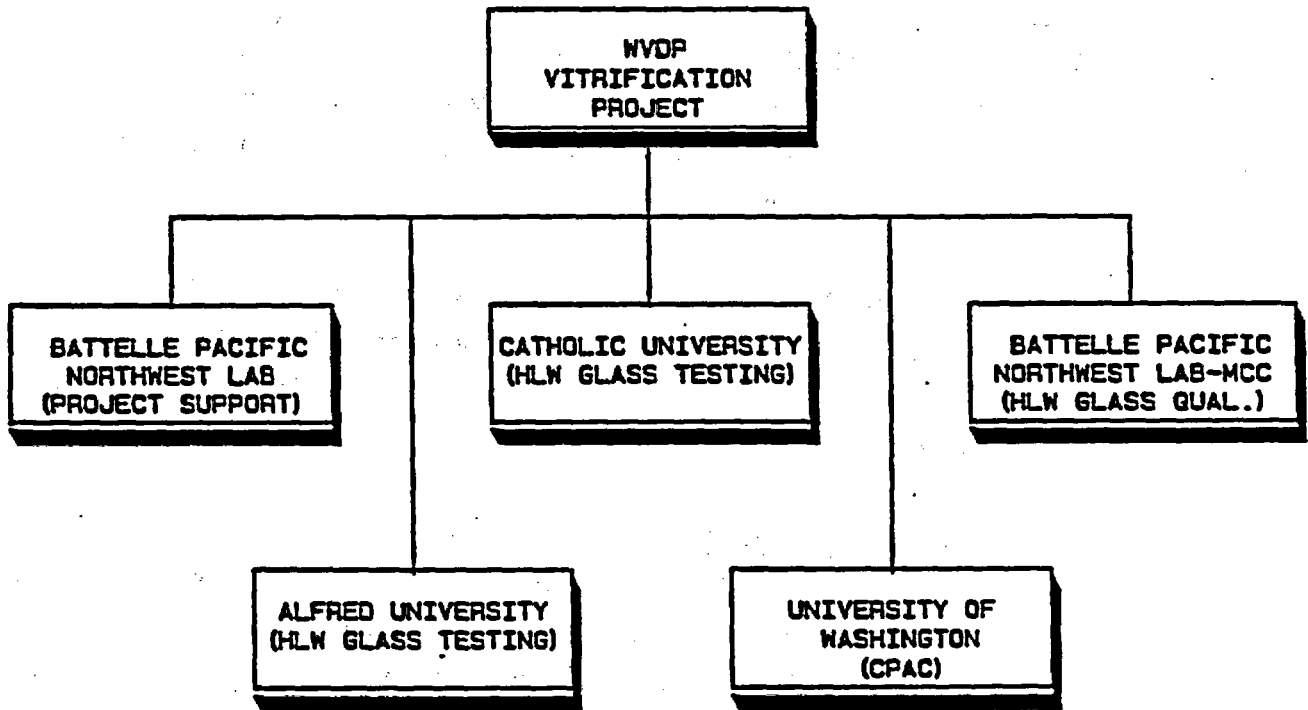


Figure 3

WVNS - PARTICIPANTS CHART



RJL0058

Figure 4

1.3 The responsibilities and authority of persons and organizations performing safety functions, or assuring that the Quality Assurance Program is established and conducted and of verifying that activities have been correctly performed are documented. A brief summary follows:

1. The President of WVNS is responsible for all functions of WVNS, including establishment and implementation of the Quality Assurance Program policies and procedures. The President may delegate authority to carry out these policies and procedures.

The President is also responsible for reviewing the Quality Assurance Program and for causing corrective action, when necessary, to be taken by the responsible West Valley Nuclear Services organizations.

2. The WVNS Deputy Manager is responsible for the performance and direction of the WVNS organizations primarily responsible for high-level waste form process technology, testing, design, engineering, and construction. In this position, the Deputy Manager is responsible for the major Project performing functions necessary for achievement of Project quality assurance objectives.
3. The WVNS Quality Assurance Department is responsible for development, maintenance, and verification of effective implementation of the Quality Assurance Program. The Quality Assurance Manager is in charge of the Quality Assurance Department. The Quality Assurance Manager has both quality assurance and management experience and the position has the following characteristics:

- A. It is at the same or higher organization level as the highest line manager directly responsible for performing activities affecting quality and is sufficiently independent from cost and schedule to assure impartiality and has authority and responsibility to verify the adequacy and implementation of the organization and subtier quality program.
- B. It has established effective communication channels with other senior management positions, including the WVNS President.
- C. It has the authority to approve WVNS and its subcontractor quality assurance manuals, changes thereto, and interpretations thereof.
- D. Stop Work Authority on matters affecting Quality is extended down the line organization by AM ER&WM through WVPO to WVNS. WVNS line staff managers may orally Stop Work when, in their judgement, the quality of the product or operation is being compromised.

Should a quality affecting Stop Work action be deemed necessary by an individual outside direct line management, the individual shall immediately notify the responsible line manager within the performing contractor or WVPO, both orally and with follow up in writing of the condition. Based on this information, the responsible line manager will decide on the need to issue a Stop Work Order. Once issued and once corrective action has been completed, it is incumbent on the line manager to lift the Stop Work Action. Stop Work and lifting Stop Work is defined in documented procedures.

E. It has no other duties or responsibilities unrelated to quality assurance that would prevent full attention to quality assurance matters.

F. It has the authority to ensure resolution of quality disputes, elevating those to the President of WVNS, if necessary.

4. Other Departments within WVNS are responsible for compliance with the Quality Assurance Program as documented in the Quality Management Manual (QMM), and for implementing the portions of the QMM applicable to them. Referring again to figure 3, the WVNS departments are structured to effectively administer the Waste Acceptance Process qualification and production activities while assuring compliance with the Project Quality Assurance Program. Their authority and duties are described in program documents.

5. All Individuals are given the right and duty to express quality allegations up to the President of WVNS, or the Director, WVPO without fear of reprisal. A well publicized policy ensures that the provisions for reporting such allegations or concerns are known and understood, and are in compliance with OCRWM directives regarding allegations.

2.0 QUALITY ASSURANCE PROGRAM

2.1 The WVNS Quality Assurance Program is documented by written policies and procedures and carried out by qualified personnel in accordance with the program documents, before initiation of activities affecting quality. Provisions have been established to assure that technical and Quality Assurance procedures

required to implement the program are consistent with regulatory, licensing, and Quality Assurance Program requirements.

Appendix A at the end of this QAPD shows the requirements, documents, and paragraphs applicable to the corresponding WVNS implementing procedures.

2.2 The WVNS Quality Assurance Program is a graded approach using quality levels (Q-levels) that relate to the safety and service classifications of items and activities. The Q-level system of classes, A, B, C, and N, is consistent with the provisions of NUREG-1318, "Technical Positions on Items and Activities in the High-Level Waste Geologic Repository Program Subject to Quality Assurance Requirements," and reflects safety-related and service-related objectives. These are based on the activity required to achieve an adequate level of confidence in equipment, items, and systems. The Quality Assurance Program covers all four levels with N (the lowest) being the responsibility of the performer to document quality achievement. The target of the Quality Assurance Program in Waste Acceptance Process activities is the items and activities that are essential to canistered waste form certification and acceptance as defined in the WAPS. These are listed in appendix I. Additional description of the graded application is provided by the WCP.

2.3 The WVNS Quality Assurance Program is operative at all periods of Waste Acceptance Process activities, including waste form development, design, testing, qualification, and production. Quality Assurance Department involvement occurs early enough in these activities to provide for planning of the quality requirements for the activity. For example, Quality Assurance reviews design and procurement specifications to design criteria for the inclusion of quality requirements. Quality Assurance participates with the organization performing purchasing and

engineering activities in the evaluation and selection of suppliers as well as identifying specific scientific or technical information to be collected, analyzed, or used. Inspection planning is developed by Quality Assurance to assure that technical requirements are met. Frequent contact exists between organizations through reports, meetings, and audits.

2.4 The WVNS Quality Assurance Program has established procedures to assure that quality objectives are met. Two examples of quality objectives are; 1) assurance that items important to safety comply with all requirements; and 2) the early detection and correction of conditions that could adversely affect items important to safety. Quality Assurance staff (in concert with line staff, when applicable) perform the following Waste Acceptance Process activities according to procedures and other documents.

1. Maintain liaison on quality matters with WVNS management, the Department of Energy, subcontractors, suppliers, and regulating agencies.
2. Publish and maintain the controlled distribution documents, such as Quality Management Manual, and the Quality Assurance Procedures Manual.
3. Verify that training and indoctrination are provided for appropriate personnel as required by written procedures.
4. Identify, review, and provide concurrence that other WVNS department's policies, procedures, and documents which affect the quality of Waste Acceptance Process and Production activities meet the appropriate quality assurance requirements.

5. Assist other departments and level 3 participants with quality planning.
6. Monitor work by WVNS suppliers and subcontractors to assure that work is performed in compliance with approved requirements. Also review and approve suppliers' quality assurance documents according to written procedures.
7. Identify quality problems and recommend or assist in the development of solutions through the responsible organization.
8. Ensure that any disagreements or allegations regarding quality problems or proposed solutions are promptly referred to higher-level management for resolution.
9. Verify implementation of solutions and conformance with established requirements.
10. Assure that items or services important to quality or safety, that do not conform to specifications, are controlled to prevent inadvertent use until disposition is authorized and implemented.
11. Recommend to line management that a stop work notice be issued whenever continuation of work could result in a violation of approved work requirements, product damage, or personal injury. Cognizant WVPO and WVNS management shall be notified immediately of any stop-work decision. During production, this does not apply to systems essential to operation of the plant; anomalous conditions detected on such systems will immediately be brought to the attention of

the responsible manager of the affected operation(s) for safe and orderly correction of the condition. They will also be reported to the Quality Assurance Manager for follow-up to affirm that adequate and timely corrective action is taken.

12. Coordinate procurement quality requirements-- such as hold points, inspection, and documentation-- for verification of compliance to requirements and specifications.
13. Verify by audit, surveillance, test, or inspection or any combination thereof, that quality requirements are met for activities affecting quality of high-level waste form production. Verification activities, including sampling, testing, and analysis activities, will be conducted in accordance with written procedures. Program status and the status of significant conditions adverse to quality will be reported to appropriate levels of WVNS and WVPO management.
14. Ensure that appropriate technical and quality requirements are invoked on items based on the assignment of quality level. The methodology for assignment of quality level shall be consistent with the guidance of NUREG-1318, "Technical Position on Items and Activities in the High-Level Geologic Repository Program Subject to Quality Assurance Requirements". A WVDP "Quality Activities List" is illustrated by Appendix I.
15. Document and report nonconforming activities and items according to written procedures.
16. Ensure that corrective actions are documented and effectively implemented in a timely manner.

17. Verifies the sample analyses of glass composition is performed.

18. Provides for the identification of required quality assurance records.

2.5 Written procedures are established for resolving allegations of inadequate quality regardless of whether the allegations originate within the responsible organization or from outside of it.

2.6 Written procedures are established to provide documented indoctrination, training, and retraining of personnel performing activities affecting quality in Waste Acceptance Process activities of high-level waste form production to assure that suitable proficiency is achieved and maintained. The purpose of the indoctrination and training program is to assure that:

1. Personnel performing activities affecting quality are appropriately trained in the principles and techniques of the activity being performed.
2. Personnel performing activities affecting quality are instructed as to purpose, scope, and implementation of governing manuals, policies, and procedures.
3. Appropriate training procedures are established, and
4. Proficiency of personnel performing activities affecting quality is maintained by annual employee appraisals to determine the need for retention, retraining, or replacement.

2.7 Written procedures are established to certify personnel who perform quality verification activities that require specific qualifications. These individuals are auditors, inspectors, nondestructive examiners, etc. and are required to be certified in accordance with the applicable Requirements, Supplements, Appendices 2A-1 and 2A-3 of NQA-1, and applicable referenced codes and standards. The requirements of NQA-1 Supplements 2S-1, 2S-2, and Appendix 2A-1 shall only apply to inspection and test personnel who conduct inspection and testing activities to verify conformance of items to specified requirements for the purpose of acceptance and to demonstrate that items will perform satisfactorily in service. Lead auditors are qualified to NQA-1, Appendix 2A-3 requirements. The requirements for other personnel who perform quality-related activities for which they must be qualified shall meet NQA-1 Supplement 2S-1, excluding paragraphs 2.7 and 2.8. This "other personnel" qualification requirement is applicable to waste acceptance special processes (see section 9.0). Job positions are analyzed for the task responsibilities of all personnel performing quality assurance activities. Proficiency of personnel performing activities affecting quality is maintained through indoctrination and training. Indoctrination and training is verified through audit, surveillance, and trend programs. Employees are appraised annually by management to assess the need for additional indoctrination and training, as applicable, as assignments, positions, and procedures change.

2.8 Written procedures are established for readiness reviews for major planned or scheduled waste acceptance process activities that affect or could affect quality. Readiness reviews provide evidence that prerequisites have been satisfied, that procedures have been reviewed for adequacy and appropriateness, and that personnel have been suitably trained and qualified. It is the

purpose of these reviews to assure that necessary activities have been satisfactorily completed before subsequent activities are authorized and initiated.

- 2.9 Surveillances shall be conducted to assess the quality of items or activities. Surveillance of activities affecting quality shall be planned, scheduled, performed, documented, and reported to appropriate management. Surveillances shall be conducted to verify quality of work in progress, document compliance, or noncompliance with requirements and procedures, identify and document actual and potential deficiencies and deviations and promote prompt corrective action by cognizant management responsible for performing the work, and verify timely implementation of corrective action.

Surveillance shall be performed by personnel who are knowledgeable in, and not directly responsible for, the activities under surveillance.

Documented surveillance reports shall include, as a minimum:

1. Date of surveillance
2. Description of the activity or item under surveillance
3. Personnel conducting the surveillance
4. Personnel contacted during the surveillance
5. The requirements governing the activity or item
6. Deficiencies identified during the surveillance
7. M&TE used during the surveillance
8. Summary of any immediate corrective actions taken.

- 2.10 Procedures are established to assure that activities affecting quality are accomplished under suitable controlled conditions, including: 1) the use of appropriate equipment; 2) a suitable

environment for accomplishing the activity, e.g., adequate cleanliness, and 3) compliance with necessary prerequisites for the given process or activity.

2.11 A management-information reporting and tracking system provides status and summary information regarding the Quality Assurance Program's effectiveness at meeting the WAPS. Program quality goals are established. Results collected from surveillances, audits, and other quality reporting activities are tracked, trended, and compared to program quality goals. Corrective action is identified and tracked. Status and summary information from this ongoing evaluation is reported to top management by the quarterly quality assurance reports prepared by the Quality Assurance Manager.

2.12 Independent management assessments by persons above or outside the quality assurance organization shall be conducted at least annually by, or at the direction of, the President of WVNS. The evaluator shall evaluate as a minimum:

1. Effectiveness of the Quality Assurance Program implementation.
2. Adequacy of planning and procedural controls.
3. Effectiveness and tracking mechanism of nonconformance and corrective action controls.
4. Adequacy of the organizational structure and staffing to implement the Quality Assurance Program.
5. Adequacy of the indoctrination and training.

6. Adequacy of the quality assurance management information tracking evaluation and reporting system.

2.13 Management of organizations participating in the Quality Assurance Program shall regularly review and report the status and adequacy of that part of the program which they are executing.

2.14 The QAPD as well as the QMM will be updated should any changes impacting the WVNS Quality Assurance Program occur.

3.0 DESIGN CONTROL

3.1 The documented WVNS Quality Assurance Program for design control was implemented prior to the inception of Waste Acceptance Process activities and will continue during the development, qualification, and production periods of high-level waste canisters. Design work is conducted in accordance with written procedures and is performed by WVNS or under the control of WVNS by architect/engineers, suppliers, and development laboratories. Appendix II provides definitions for design, design information and design activities. The design control criterion is consistent with 10 CFR 60 and enfold the requirements for:

1. Procedures are established and implemented for the control of computer software that is essential to meeting the applicable WAS. Computer software control is described in section 19.
2. Peer reviews and technical reviews, including DOE directed reviews such as those performed by the WVDP Technical Review Groups (TRG).

3. Control of experiments and developmental activities.
4. Qualification of data.
5. Configuration control of approved designs, including modification and change control. See 3.17
6. Documentation of identified errors or deficiencies in approved designs, including corrective action, when appropriate.
7. Information derived from experience, as set forth in reports or other documentation, shall be made available to cognizant design personnel.

3.2 Essential WVNS engineering Waste Acceptance Process activities are accomplished in accordance with documented and approved procedures which provide for the basic elements of planned systematic control including:

1. Establishment and implementation of scientific and engineering criteria.
2. Establishment or identification of engineering procedures for control, including identification and documentation of errors or deficiencies in approved designs.
3. Assurance that design inputs and outputs are appropriately specified, described, reviewed, and approved on a timely basis.
4. Development of data and designs and performance of analysis.

5. Performance of qualification and/or verification of data and designs, including control of erroneous, rejected, superseded, or otherwise unsuitable data.
 6. Control of changes and modifications.
 7. Control of interfaces among organizations.
 8. Development and maintenance of documentation and records.
 9. Test control and verification testing, including evaluation of results, when required.
 10. Peer review and Technical review.
 11. Qualification of existing data.
 12. Verification and validation of computer software.
- 3.3 WVNS Engineering initiates and maintains schedules for preparation of documents, specifying and approving design inputs, review of interface requirements, verification of materials suitability, preparation of changes in the descriptions of system designs, qualification testing, conduct of reviews, and release of documents.
- 3.4 Procedures are established for the definitions and control of WVNS computer software, data, and designs. These procedures are directly applicable to WVNS scientific and engineering activities and to the approval by WVNS of designs and data developed by other participants. In addition, WVNS invokes Section 3 of NQA-1 on other organizations and participants, as applicable, to assure

their use of adequate design control systems. Design controls include conceptual designs, or parts thereof, which may become part of the final design.

- 3.5 The importance to safety, performance objectives, and other basic criteria of new designs are reflected in the description of system designs. The criteria include, but are not limited to, materials, processes, interfacing characteristics, and operating parameters. Any changes to these criteria are also incorporated into the description of system designs. These changes are approved by WVNS according to established procedures.
- 3.6 Standards, code classifications, and regulating agency requirements, that are incorporated into the design of new or replacement items are in accordance with system design requirements. Standards are used for items on which plant safety or operability depends, except where industrial standards have been determined to be fully adequate. Designs incorporate the latest revisions of the applicable codes, standards, and regulating agency requirements in effect on the date of design approval.
- 3.7 Whenever possible, new and revised specifications and designs use materials, components, and processes already in use and proven at WVNS. Material properties are based on nationally accepted standards. Applicable data and documentation are provided to validate all changes requested and establish requirements for any design verification or testing necessary for validation. Qualification of existing data will be reviewed, approved and documented in accordance with NUREG-1298, Qualification of Existing Data for High-Level Waste Repositories.

- 3.8 The engineering and scientific activity reviews original drawings and specifications for applicability when authorizing procurement of spares or replacements. Approval by involved and affected WVNS departments is required in this review, and the original documents are upgraded, if necessary.
- 3.9 Drawings and specifications for new and redesigned items are reviewed prior to approval for inclusion of applicable requirements for materials, quality assurance, safety, fabrication, constructability, interchangeability with original equipment, and measures to protect the items against damage or deterioration. These include requirements for cleanliness control, preservation, packaging, handling, shipping, and storage.
- 3.10 All drawings and specifications applicable to the Vitrification Project or its operation are controlled by the WVNS organization(s) responsible for this activity.
- 3.11 An identification system has been established in which each piece of equipment and instrument in the WVDP has been assigned a unique identifying number. This system is extended as necessary to include equipment spares and new equipment. Spare parts are identifiable to the components and systems in which they are to be used.
- 3.12 Design documents specify traceability of parts and components to manufacturing lot, batch, or heat numbers, including item identification, as required. Such requirements are as stringent as those of applicable codes and standards. When marking methods could be detrimental to component function or integrity, provisions to prevent adverse consequences are included in the design documents.

- 3.13 Design descriptions for spares, experiments, and for new or redesigned equipment and facilities are reviewed by the Quality Assurance Department to assure that acceptance criteria have been included for all specified requirements. Deviations from these standards are controlled.
- 3.14 The established system for the review and approval of WVNS designs and changes is also applied to the review and approval of supplier documentation, such as inspection and test plans and manufacturing procedures. Under this system, a procedure or description is first submitted to the WVNS cognizant engineer. The cognizant engineer confirms the final approval level required and determines the list of reviewers and approvers in accordance with established procedures. Individuals who perform reviews shall be independent of those who perform the work. Classification criteria for the final approval levels of changes including nonconformances are based on the impact of the change on the existing design.
- 3.15 Procedures identify the various organizations and disciplines that must verify or approve designs. These procedures provide for appropriate verification and concurrence by Quality Assurance, Safety, and other organizations. Quality Assurance reviews such aspects as the completeness and adequacy of acceptance criteria, areas to be verified, sufficient verification independence, provisions for item protection, clarity and completeness of technical requirements, quality assurance requirements including the selection and application of quality assurance standards, and documentation requirements. Documented comments, approvals, and disapprovals are collected and reconciled by the cognizant engineer, who then obtains final approval of the document.

- 3.16 WVNS Records Management maintains the engineering documents that define all new or revised designs, including approval records. Following final approval, design documents are signed and released for Project use.
- 3.17 Design changes, including field changes, are subject to the same design controls that were applicable to the original design. An Engineering Change Notice (ECN) System is used for review, approval, and communication of design changes. ECNs identify associated changes to procedures, training, and controlled Project documents.
- 3.18 Suppliers, users, and contractors are required to establish and implement systems which assure that WVNS approval of specified documents and changes thereto is obtained prior to implementation.
- 3.19 A centralized control system is used to assure that drawings and specifications used are current. Only specially stamped drawings and specifications may be used for construction.
- 3.20 Lists of approved drawings for the WVNS plant are kept current by WVNS Project Engineering for reference and for use during spares procurement and design or modification of new or revised equipment. Architect/engineers and suppliers of design-and-build items for plant modifications are required to maintain complete drawing lists.
- 3.21 At the start of each design, the cognizant engineer or manager specifies the types of design verifications necessary, formal or informal design reviews, technical or peer reviews, and at what stages of design evolution these will be conducted. This

includes appropriate consideration and/or recommendation for independent review by the WVDP Technical Review Group (TRG). Alternate calculations or qualification tests will be used where appropriate. The design reviews are systematic evaluations to assure agreement with design criteria and elimination of errors. The results of all reviews are documented.

- 3.22 For items important to safety and waste isolation, the WVNS procedure for formal design review and/or verification provides for the appointment of a qualified design review chairman and establishes his authority for organizing and conducting the review, and for the resolution of resulting action items. It establishes the criteria for the method of review, identifies the organizations or functions to be represented, and establishes the qualifications and the responsibility of the participants to review the data packages prior to the meeting and to resolve action items in a timely manner. For formal design reviews, the majority of the design review committee is not directly involved in the development of the design. Agenda checklists are used for all reviews. Action items resulting from the reviews are documented, scheduled, and followed up. Formal design reviews typically include representatives of all technical disciplines involved in the design and are applicable to the entire design. Verification and/or validation are completed and documented prior to release for procurement or use.
- 3.23 Informal design reviews are typically aimed at specific design problems and involve only those personnel specifically needed to resolve the problem.
- 3.24 For design or modification/change activities, which use untried or beyond the state-of-the-art testing and analysis elements, a peer review (for example by the DOE directed WVDP Technical

Review Group) in compliance with NUREG-1297, "Peer Review for High-Level Nuclear Waste Repositories," is conducted as part of the review/verification process. Peer review is also applied when detailed technical criteria and requirements do not exist. Peer review results are to be documented and retained as Project quality assurance records.

- 3.25 Based on assigned quality level, Quality Assurance maintains an overview of the design review program through participation in the reviews and through audits. In the reviews, Quality Assurance concentrates on such aspects as completeness of design criteria, consistency of detailed design with the criteria, control of changes, control of interfaces, acceptance criteria, adequate and appropriately independent design verification, interchangeability, resolution of problems, and adequacy of documented records. Quality Assurance also overviews design review preparation, participation by appropriate disciplines, and follow up.
- 3.26 WVNS design verification by testing is specified in test plans. Test plans are prepared by Engineering and identify test objectives, test parameters, the item or process to be tested, the tests to be performed, and the facility to be used. They identify the test articles and their disposition. They also specify requirements for data acquisition and reduction, pre-test and post-test examinations, any readiness reviews, and documentation. The quality assurance requirements for the test plans are also included.
- 3.27 Procedures for conducting WVNS design verification tests are defined in the test plans. These procedures identify the prerequisites for conducting tests and define the detailed test evolution and data requirements. Where a test program is used to

verify the adequacy of a specific design feature in lieu of other verification processes, it includes suitable qualification testing of a prototype under the expected ranges of design conditions.

3.28 WVNS maintains or archives the record copies of approved drawings and specifications, evidence of their verification and approval, the descriptions of system design, and official correspondence. The responsible WVNS technical organizations initially maintain record copies of design reviews and follow ups, "Holds" and "To Be Determined" reports, drawing lists, engineering studies, Approvals-In-Principle, test requests, and test plans.

3.29 Deficiencies detected in approved designs shall be documented, corrected, and analyzed for cause and corrective action to preclude or minimize recurrence.

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 WVNS has established procedures for Procurement Document Control which provide assurance that applicable regulatory requirements, design bases, and other requirements necessary to assure adequate quality of Waste Acceptance Process activities are included or referenced in documents for procurement of items and services. Procurement documents include appropriate spares and replacement parts as well as appropriate acceptance and rejection criteria. The procedures delineate the actions to be accomplished in the preparation, review, approval, and control of procurement documents.

4.2 To the extent of an item's importance to safety, and waste isolation, procurement documents require suppliers and their subtier suppliers to have Quality Assurance Programs consistent

with the requirements contained in the purchase documents. The requirements are commensurate with the Q-Level of the item or activity.

- 4.3 Suppliers are surveyed and evaluated to assure that sufficient and appropriate systems, procedures, and personnel are available to meet the programmatic and technical requirements of the order. Records are maintained on all suppliers surveyed to show those quality assurance attributes available within their Quality Assurance Program. The WVNS Purchasing organization obtains approval from Engineering and Quality Assurance management of potential suppliers. When deemed appropriate, WVNS will permit certain specified supplier activities to be performed under the jurisdiction and control of the WVNS Quality Assurance Program. Procurement documents will specify those portions of the WVNS program that are applicable to the supplier's work efforts, including activities to be conducted by WVNS personnel.
- 4.4 Procurement quality requirements, including right of access by WVNS and it's customer, as applicable to all related facilities and documentation, are specified in procurement documents.
- 4.5 The procurement documents and changes are reviewed and approved by Quality Assurance and others based on the quality level of the procurement action. QMM procedures establish organizational responsibilities for procurement planning, procurement documents, supplier selection, bid evaluation, and acceptance of supplier quality assurance programs. The review and approval of procurement documents are documented prior to release.

5.0 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

- 5.1** WVNS has established procedures that define the requirements for preparation, review, approval, issuance, and changes to instructions, procedures, and drawings. These procedures ensure that documents generated to support Waste Acceptance Process activities such as processing, equipment maintenance, testing, inspection, and product handling are prescribed in sufficient detail to ensure appropriate controls and provide documented verification of satisfactory accomplishment. An independent review of the procedures shall be performed by the originating organization to assure technical adequacy and the inclusion of quality requirements. Organizational responsibilities for assuring that quality related activities are specified and implemented by procedures are described by administrative procedures.
- 5.2** Procedures are required to identify specific steps required to finalize instructions, procedures, and drawings. Independent review by technical specialists and Quality Assurance is required before procedures are approved. Methods to ensure resolution of comments by reviewing organizations prior to the document being released are specified.
- 5.3** Documented instructions, procedures, and drawings include appropriate acceptance criteria for verification that prescribed quality has been achieved. Procedures shall identify documents generated by implementation that are to be designated as quality assurance records.
- 5.4** Work Instructions for melter and related equipment testing and facility work are prepared, reviewed, approved, and issued in accordance with procedures.

6.0 DOCUMENT CONTROL

- 6.1** WVNS has established procedures to control the issuance of documents such as instructions/work orders, procedures, drawings, design, and technical supporting documents, and QA documents that define Waste Acceptance Process activities. These procedures also describe how changes are made to documents and how obsolete or superceded documents are removed from use.
- 6.2** WVNS uses a review process that includes qualified, technical specialists, using pertinent background information to ensure that the documents are adequate, and are approved by authorized personnel prior to issuance. Documents are issued for use to the area where the prescribed work will be performed prior to starting the work. The use of unreleased documents is prohibited. Review comments must be resolved before documents are released. Records providing evidence of comment resolution are maintained as quality assurance records. Obsolete or superceded documents are promptly removed from the work areas.
- 6.3** Master document lists for WVNS documents, including quality assurance and technical procedures, are maintained to assure that only the current document revision is listed and available for use. Only verified and fully approved documents are released for use. The quality assurance organization reviews controlled documents and where applicable, ensures by concurrence that documents contain or implement quality assurance requirements.
- 6.4** All document changes are reviewed and approved by the same organizations or organizational functions that performed the original review.

- 6.5 The types of documents controlled are identified with the organization responsible for obtaining review, approval, and issuance.
- 6.6 Controlled distribution documents (or manuals) are individually numbered and subjected to a receipt acknowledgment system for initial issue and revision.
- 6.7 WVNS assures through surveillance and inspection that correct and applicable documents are available prior to commencement of work, at locations where activities affecting quality will be performed.

7.0 CONTROL OF PURCHASED ITEMS AND SERVICES

- 7.1 WVNS has established procedures for control of purchased material, equipment, computer software, and services to ensure compliance to technical and waste acceptance requirements. Evaluation and selection of sources of supply prior to award of the purchase order are defined by procedure.
- 7.2 Qualified personnel survey and evaluate proposed suppliers of quality-related services and items, as required, based on the quality level of the item being procured. The survey is documented. Quality Assurance concurs with the proposed acceptable supplier list prior to issuing the procurement package for supplier quotations. For specific major or critical procurements, Quality Assurance will participate in the entire supplier selection process.
- 7.3 Upon award of a procurement action, suppliers are required to submit specified Quality Assurance Program documents to show how the quality assurance requirements of the procurement action will be met. When required by procurement documents, supplier quality

assurance programs must be reviewed and accepted prior to initiation of activities affecting quality. As described in paragraph 4.3, portions of the WVNS Quality Assurance Program may be specified for application to supplier activities.

- 7.4 Procurement documents and changes define requirements for specific WVNS inspection hold points beyond which a supplier may not proceed until released, in writing, by WVNS Quality Assurance. Suppliers are required to flow-down the applicable purchase order requirements to sub-tier suppliers.
- 7.5 Surveillance at supplier's facilities is planned and conducted during the life of the contract by WVNS Quality Assurance or a representative of the WVNS Quality Assurance Department based on the items' importance to safety and the suppliers quality history. These surveillances are performed to verify compliance with the procurement quality assurance requirements. Surveillances may include independent source inspection and release of items at the supplier prior to shipment.
- 7.6 Upon receipt of items at WVNS, planned receipt inspection is performed and documented to verify conformance to specified procurement documents.

As a minimum, receipt inspection records shall identify:

- A. Characteristics inspected and objective evidence of results.
 - B. Receipt inspection acceptance criteria, including source of requirements.
 - C. M&TE used for inspection.
- 7.7 Upon acceptance of all procurement actions by Quality Assurance, a Quality Release is issued to permit the item to proceed with

further processing. Hold or conditional release tags are used by Quality Assurance to prevent the release of items that have not met all procurement requirements. Items fully acceptable and released by Quality Assurance are tagged with an "Accept" tag or otherwise identified.

- 7.8 Supplier quality assurance documents, including, when required, a copy of the supplier's final Certificate of Conformance are reviewed by qualified personnel and maintained in the WVNS Quality Assurance inspection working file.
- 7.9 Nonconformances are processed as described in section 15 of this QAPD. Audits of suppliers are described in section 18 of this QAPD.
- 7.10 When the use of a specific commercial grade items is identified in design outputs, the following requirements shall apply:
 - A. An alternate commercial grade item may be used provided the cognizant design organization provides verification that the alternate commercial grade item will perform its intended function and will meet the design requirements applicable to both the replaced item and its application.
 - B. Supplier evaluation and selection shall be determined by WVNS based on the items complexity and importance to safety in accordance with paragraphs 4.3 and 7.2.
 - C. Commercial grade items shall be identified in the purchase order by the manufacturer's published product description, such as catalog number.

D. A receipt inspection of the item shall be performed, and shall verify as a minimum:

1. damage was not sustained during shipment,
2. item received was the item that was specified on the WVNS purchase document,
3. inspection/testing is accomplished as required to assure conformance to manufacturer's published requirements, and
4. correct and accurate documentation was received.

8.0 IDENTIFICATION AND CONTROL OF ITEMS

8.1 WVNS has established, where appropriate, procedures for the identification and control of archival samples, materials, parts and components for Waste Acceptance Process activities, including in-house control of canisters and other items associated with or used in the production of the final canistered waste form. Procedures provide detailed instructions for the preparation of equipment and material specifications, including the designation of quality level and the resulting review and approval cycle. Quality Assurance reviews the specification for the incorporation of applicable quality requirements. This review includes, for example, material identification, material and equipment test reports, shelf life, manufacturing and inspection requirements, and special shipping and handling requirements. Procedures are established to assure that identification is maintained and traceable to appropriate documents. Verification of correct identification is required before release for use or analysis. Controls are established to preclude inadvertent use of defective items.

- 8.2 After approval of material/equipment specifications, a procurement package and purchase requisition is prepared. Quality Assurance reviews the package for incorporation of proper quality requirements.
- 8.3 WVNS specifies to the supplier, per the purchase order and related specifications, necessary material controls such as equipment identification numbers, heat and lot or batch numbers for raw materials or any other unique identification to assure positive control of WVNS material and associated test, inspection and acceptance reports.
- 8.4 Upon receipt at WVNS, a Quality Assurance inspector verifies the identification of the item and its documentation. Acceptable items are then released to controlled stores. Procedures require that items important to safety be listed for the purpose of maintaining control and traceability of an item to its point of use.
- 8.5 The shelf life of an item is identified, if required, to assure that it will function as originally intended.

9.0 CONTROL OF PROCESSES

- 9.1 WVNS has established procedures to control special processes at WVNS as well as at WVNS' suppliers to ensure quality consistent with design requirements. Special processes include, but are not limited to, welding, NDE, heat treating, canister cleaning, and glass production. Production processes for waste form production are considered to be special processes and shall be appropriately controlled. Control procedures are developed for processes which specify preparatory steps, special process qualification requirements, (procedures, equipment, and personnel), processing details, test conditions and the requirements for records.

- 9.2 Records are required which provide objective evidence that special processes were acceptably accomplished in compliance with approved process control procedures, by qualified personnel using qualified equipment. Quality Assurance verifies that procedures, personnel and equipment, and qualification and control requirements are adequately specified to subcontractors on Purchasing documents and equipment specifications.
- 9.3 Quality Assurance Procedures provide a system for evaluation of supplier abilities to comply with special process control requirements prior to contract award and confirmation of adequate control during contract performance.
- 9.4 Performing organizations are responsible for criteria establishment to identify and list processes requiring control of special processes. Quality Assurance monitors special process qualification activities and reviews and approves internal work documents such as standard operating procedures and work orders for adequate incorporation of process control requirements.
- 9.5 For work performed at WVNS requiring control of special processes, Quality Assurance Procedures provide for in-process verification of WVNS work activities for compliance to process control conditions and requirements as specified in approved work packages.
- 9.6 Characteristics of items that are important to safety, which cannot be readily verified by test or inspection of final product, require process control including documented procedures for performance, personnel training and qualification, and procedure qualification. Areas which require process control during waste canister production are HLW slurry feed production,

canistered glass production, canister closure, canister decontamination, and canister transfer and storage.

9.7 Process control requirements are part of the vitrification operations procedures reviewed and concurred with by Quality Assurance. The areas covered by the procedures may include for example the following:

1. Identification of required equipment and instrumentation,
2. Identification of control parameters and operating limits for those parameters,
3. Environmental conditions and requirements,
4. Instrument calibration frequency,
5. Reference to applicable codes, standards, procedures, and specifications.
6. Adequate and verified process acceptance by demonstration or technical/peer review.
7. Personnel training and qualification requirements.
8. Process qualification.

10.0 INSPECTION

10.1 Procedures are established for classifying items and for identifying significant quality characteristics to be measured to verify conformance to specifications. Inspections are performed according to documented instructions, procedures, or drawings such as Inspection Instruction Data Sheets. Inspection results are documented and evaluated, and their acceptability determined by a responsible individual.

10.2 The performance of inspections is planned and includes:
1) identification of characteristics or activities to be inspected; 2) identification of personnel performing

inspections; 3) description of inspection method; 4) required M&TE (including accuracy requirements), documents, and revisions; and 5) appropriate acceptance and rejection criteria. Inspection plans will identify inspection hold points including, when appropriate, inspection witness points requested by WVPO. The frequency and methods of inspection are selected to assure that the required quality is obtained. Inspection instructions and plans are prepared from drawings and specifications by Quality Assurance prior to performing the inspection.

- 10.3 Inspection activities are performed by personnel other than those who performed the actual work activity. Individuals performing inspections are part of the Quality Assurance organization, or are qualified individuals independent of the performing organization directly responsible for the activity being inspected.
- 10.4 Inspectors that perform the required inspections are qualified by appropriate training or experience to written procedures. Nondestructive Examination (NDE) personnel are certified in accordance with the American Society for Nondestructive Testing Standard SNT-TC-1A, "Recommended Practice for Nondestructive Testing Personnel Qualification and Certification." Inspector personnel's qualifications or certifications are kept current.
- 10.5 Contractor and supplier inspection programs are evaluated by Quality Assurance to ascertain compliance with contract requirements.
- 10.6 The types of inspections performed are source inspections, receiving inspection, in-process inspection, testing, and process monitoring. Inspections performed for each work

operation or process activity to verify quality of equipment, materials products or process are direct. If direct inspection is impossible or disadvantageous, indirect control by process monitoring methods is used. Both inspection and process monitoring are used when control is inadequate without both.

- 10.7 Nonconformances detected during performance of quality-specified inspections or process monitoring are documented and processed in accordance with procedures. Replaced, modified, or reworked items are inspected by methods that are equivalent to the original inspection method.
- 10.8 When mandatory sampling or inspection hold points are identified in design and test documents, the work may not proceed without the authorization of Quality Assurance. This is accomplished by including hold points in work documents, test procedures and operating procedures during preparation. Consent to waive specified hold points shall be recorded prior to continuation of work beyond the designated hold points. The authority for waiving hold points is specified in the WVNS Quality Management Manual.
- 10.9 Inspection and test records contain the following, where applicable:
- a. identification of inspection procedure, characteristics inspected, and item or activities to be inspected or tested;
 - b. a description of the type of observation, including acceptance or rejection criteria used;
 - c. identification of specific equipment, or M&TE, including accuracy requirements;

- d. the date and results of the inspection or test;
- e. information related to conditions adverse to quality;
- f. inspector or data recorder identification;
- g. evidence as to the acceptability of the results, the signature and organization;
- h. action taken to resolve any discrepancies noted.

11.0 TEST CONTROL

11.1 WVNS has established a test control program that provides for assuring that testing required to demonstrate that processes, items, and services conform to the WAPS. Personnel performing tests are trained and appropriately qualified. Tests are performed in accordance with written test procedures that incorporate or reference the requirements and acceptance limits contained in applicable design documents or other pertinent technical documents. Potential sources and allowances for uncertainty and error shall be identified in test plans and procedures. Acceptance criteria shall include and delineate appropriate precision and accuracy considerations for M&TE.

11.2 The test control program includes testing that will be performed in the high level waste (HLW) process qualification and production phases. This includes development and acceptance testing, and testing for product verification. Testing is specified, approved, and controlled through the use of test requests, test plans, test matrixes and test procedures. As appropriate, inspection or hold points by Quality Assurance or WVPO personnel will be identified in the test procedures.

- 11.3 Verification tests performed to written procedures shall demonstrate the capability of the computer software program to produce valid results for test problems encompassing the range of permitted usage defined by the WVNS procedures.
- 11.4 When required, test requirements for sampling will include appropriate provisions for collection and maintenance of archival samples.
- 11.5 Acceptance of test results is performed through test reports and test report summaries. Mandatory evaluations and approvals by qualified personnel are required where appropriate throughout the test control program to verify that design criteria, safety analysis report and quality requirements are met. Acceptance criteria shall be provided or approved by the organization responsible for the design.
- 11.6 The WVNS test program establishes measures, including Quality Assurance overview, to assure that test procedures have provisions for including prerequisites and for verifying that they have been established and performed. Instrumentation and equipment required for testing is specified to satisfy test requirements, including calibration, precision, and accuracy considerations. Environmental conditions are reviewed for adequacy for the tests being performed.
- 11.7 The test control program establishes requirements by which test results are documented and evaluated to assure that test requirements have been satisfied. WVNS procedures identify organizational responsibilities for test result review and acceptance. Where appropriate, technical or peer review teams are established for the review, evaluation and acceptance of test data.

11.8 Items tested, including archival samples, are identified, controlled, and ultimately dispositioned.

11.9 Test records shall contain the information described in section 10.9 as appropriate.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 WVNS has established procedures for the control of measuring and test equipment (M&TE). Quality Assurance Procedures require that all measuring and test equipment used at WVNS for accepting material or equipment, controlling special processes, verifying critical operation of the facility, or obtaining test data be identified and calibrated against certified standards having traceability to nationally recognized standards. Unless limited by state-of-the-art, calibration standards shall have equal to or greater accuracy than the equipment being calibrated. Calibration standards with the same accuracy may be used if they can be shown to be adequate for the requirements. The basis for acceptance is documented and authorized by responsible management identified as authorized to perform this function, in the Quality Management Manual. If no nationally recognized standard exists, the basis for acceptability of the calibration is required to be documented.

12.2 Calibrations are required to be performed at prescribed intervals which will provide confidence in the reliability of the M&TE. Quality Assurance procedures specify required documentation including labeling or tagging including due date for next calibration. Also required are traceable records of M&TE calibrations. Each organization possessing M&TE is responsible for issuing, approving, and implementing a calibration program.

- 12.3 Calibration implementing procedures require review, evaluation and disposition to verify that equipment and materials accepted or checked with discrepant equipment is evaluated and/or rechecked to verify that no adverse condition exists.

13.0 HANDLING, STORAGE, AND SHIPPING

- 13.1 WVNS has established procedures for the cleaning, preservation, packaging, handling, shipping, and storage (PPHSS) of waste form production materials and items which are purchased, fabricated, shipped, or stored by WVNS. These practices and procedures are applied, as applicable, for the control of any necessary archival samples from waste form development and production. If archival samples are required, procedures will be modified to incorporate the requirements of RW-0214, appendix B, paragraph 13.1. The objective of the procedures is to prevent damage, loss or deterioration of items essential to meeting the WAPS and to provide safety to personnel performing quality-related tasks for the Vitrification Project.

- 13.2 Activities related to handling, storage, and shipping are performed to established procedures, work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents.

- 13.3 Cognizant organizational managers are responsible for:

1. Incorporating any special cleaning, preservation, packaging, handling, shipping, and storage requirements into design, procurement, contractual, and instructional documents.

2. Preparing and obtaining approval of procedures for critical lifts, components, handling operations, and other high value or critical items, as applicable.
3. Identifying requirements for trained operators for special handling and lifting equipment.
4. Establishing requirements to ensure safe and adequate handling for particular items, special tools and equipment (such as containers, shock absorbers, and accelerometers), and special protective environments (such as inert gas atmosphere, specific moisture content levels, cleanliness, and temperature levels). These items shall be specified, provided, and their existence verified at specified intervals through inspection and tests.
5. Instructions for marking and labeling for packaging, shipment, handling, and storage of items are required to be established as necessary to identify, maintain, and preserve the item, including indication of the presence of special environments or the need for special controls.

13.4 Quality Assurance performs surveillances and audits to verify compliance to PPHSS program requirements.

14.0 INSPECTION, TEST, AND OPERATING STATUS

14.1 WVNS has established procedures for the identification of the status of inspection and test activities on items, or documents traceable to the item, to insure that required tests have been performed and to assure that items including the canistered waste form, which have not passed the required inspections and

tests are not inadvertently installed, used or operated. Any altering of the sequence for tests, inspections, or operations important to safety will be subjected to the same controls as the original review and approval.

14.2 Procedures exist for a facility status control system. The procedures address the status of items and require the operating status of facilities to be identified, documented, approved and controlled. The status of nonconforming, inoperative, or malfunctioning structures, systems, and components is documented to prevent inadvertent use. The organization responsible for this function is identified in operational procedures.

14.3 The test status of individual items important to safety, and the operational status of quality-related structures, systems, and components shall be indicated by utilizing tags, stamps, labels, logs, or other suitable documentation. Application and removal of status indicators is procedurally controlled.

14.4 WVNS incorporates the status of inspection and test activity requirements into procurement, contractual and instructional documents to assure that these requirements are implemented by suppliers and subcontractors.

14.5 The status of high-level waste processing equipment readiness to operate will be evaluated, prior to operation, by readiness reviews.

15.0 CONTROL OF NONCONFORMING ITEMS

15.1 WVNS has established procedures which define the measures required to control computer software codes, materials, parts, components or equipment that do not conform to requirements in

order to control further processing, installation, use, or delivery. Procedures describe Quality Assurance and other organizational responsibilities and authority.

- 15.2 Internal nonconforming items are identified on Nonconformance Reports (NRs). The NR procedure describes measures that provide for, as appropriate, identification, documentation, segregation, disposition, and notification to affected organizations. Quality Assurance will incorporate WVPO identified nonconformances into the NR system and will assure acceptable review and disposition. NRs are reviewed and approved for disposition by the cognizant engineer, the using organization, and Quality Assurance. WVNS will obtain concurrence of the disposition from WVPO if required.
- 15.3 Assigned individuals or organizations with responsibility for nonconformance disposition shall ensure:
- A. Adequately documented identification and description of nonconformance.
 - B. Appropriate action, when required, to change existing design documents, test plans, or procedures.
 - C. Documented approval signatures for authorized disposition.
- 15.4 Corrective actions are identified, when appropriate, to prevent a recurrence of the nonconformance.
- 15.5 Hold tags are affixed to the items identified on the nonconformances. These hold tags are replaced with either "accept," "conditional" or "scrap" tags depending on the disposition of the NR. If identification of each nonconforming item is not practical, the container, package, or segregated storage area, as appropriate, shall be identified.

- 15.6 Suppliers and contractors report nonconformances to WVNS, identifying deviations from procurement requirements, on a Supplier Nonconformance Report (SNR) according to procedure. Prior to items being shipped to WVNS, all SNRs must be dispositioned by WVNS. WVNS will obtain concurrence of the disposition from WVPO if required. Suppliers list all SNRs on their final Certificate of Compliance which is provided to WVNS with the items being shipped. Procurement packages define the supplier's responsibility when detecting a SNR condition and his method of reporting the nonconformance to WVNS.
- 15.7 Quality Assurance performs quarterly analysis of nonconformance documents to identify root causes and detect adverse quality trends. Results of these analyses are reported to WVNS upper management for review and assessment.

16.0 CORRECTIVE ACTION

- 16.1 WVNS has established procedures for the identification and correction of the causes of significant conditions adverse to quality, such as errors or deficiencies in approved designs, hardware or system failures, deviations, equipment defects and nonconformances in processes. Occurrence Reports (ORs) and critiques are included in the procedures. Other systems that further support the identification and resolution of adverse conditions are internal and external audits, WVNS and WVPO surveillances, Operating Plant Deficiencies and Test Exceptions. Procedural instructions and policy guidance provide criteria for determining the existence of significant conditions adverse to quality. Quality Assurance provides follow-up to verify timely and proper implementation of corrective actions.

- 16.2 When significant conditions adverse to quality are discovered through inspection, test, evaluation, audit or other means, it is the responsibility of the identifying organization to determine the significance and select the most appropriate reporting mechanism, such as OR, Request for Corrective Action (RCA), Nonconformance Reports (NR), or Critique.
- 16.3 WVNS procedures govern the reporting of investigation and analysis of significant conditions adverse to quality to identify adverse quality trends and help determine the root cause(s), identify and establish remedial actions to correct the problem and prevent its recurrence. Quality trends and results of remedial actions shall be reported to organizations responsible for corrective action and appropriate upper-management for review and assessment. Quality Assurance shall concur with remedial action to assure that quality requirements are satisfied, and shall follow-up to verify implementation, effectiveness, and timely closeout of corrective action.
- 16.4 Quality Assurance collects key information from nonconformance reports (NR's), Request for Corrective Actions (RCAs), ORs, and critique events and inputs this information into a data base. This information is analyzed quarterly by quality assurance to identify adverse quality trends. Analysis is performed so as to ensure prompt identification of adverse quality trends. Using the data base, evaluations are performed to determine systematic root cause(s) and establish a course of action for correction.

17.0 QUALITY ASSURANCE RECORDS

- 17.1 Procedures are established to ensure that records which furnish documentary evidence of quality are specified, prepared, collected, stored, declared, authenticated, and maintained.

These procedures meet the requirements of WVDP-105 (DOE/EM/WO/04 Rev. 0), Vitrification Projects Records Management Policies and Requirements, including Appendix C. Records are protected against damage, larceny, vandalism, deterioration, or loss. Requirements and organizational responsibilities for record transmittal, distribution, retrieval, correction, retention, storage, maintenance, and disposition are defined by Quality Assurance and documented in written procedures. Documents are to become quality assurance records upon completion and authentication by all required signatures. Prior to final authentication, interim protection shall be provided. Quality Assurance procedures include criteria for records validation and temporary control and protection before being entered into permanent storage. The records validation process provides the necessary review to assure that records are verified for necessary identification, accuracy, legibility, and authentication. Other controls which cover activities affecting quality-related records, including those generated by subcontractors, suppliers, engineering, and experimental or testing activities are described in applicable sections of their implementing procedures.

- 17.2 Permanent storage of WVNS quality-related records is accomplished through the Project Master Records Center (MRC). This records control unit, operated by Records Management, provides storage, preservation, and safekeeping in compliance with NQA-1, Supplement 17S-1. Records Management, in compliance with procedures, validates, stores, microfilms and transmits WVNS/WVDP records to archival storage. Records Management also provides records management and retention for Project quality assurance records generated and/or submitted by WVPO, DOE-ID or EM. Lifetime records such as laboratory and field notebooks, log books, data sheets, data reduction documents, and computer software that are generated during the qualification process and

production phase will be transmitted to the DOE Headquarters Record Center located in the State of Maryland at the completion of the production phase. Lifetime records generated during storage and transportation will be provided to the DOE Headquarters Records Center and Federal Waste Repository at the completion of transport phase.

- 17.3 Production records required to furnish evidence of the required quality for the High-Level Waste Acceptance Process activities and DOE System 80 for control of Training, and Qualification Records will be generated and controlled as quality records. Documentation sufficient to demonstrate canistered waste form compliance with the WAPS, WQR, and WCP will be prepared and also maintained as quality records.

These records will be collected and maintained as follows:

- A. Documentation sufficient to demonstrate canistered waste form compliance with the WAPS, WCP, and WQR will be collected and maintained as lifetime quality records by WVNS. Other documentation generated during the preparation and implementation of the WCP will be collected and maintained as nonpermanent records.
- B. Documentation sufficient to support preparation of the WQR will be collected and maintained as lifetime quality records. Other documentation generated during the preparation and maintenance of the WQR will be collected and maintained as nonpermanent quality records. The WCP and/or WQR will identify the types of records that will be developed during the waste form production process. The WQR will identify the quality records required to be a permanent part of the overall canistered waste form product certification package.

- C. Production documentation shall be traceable to each individual canister, and shall become lifetime records transferable to the DOE Headquarters Record Center.

18.0 AUDITS

- 18.1 WVNS has established a program (described in written procedures) for conducting comprehensive planned and periodic audits to verify compliance with all aspects of the Quality Assurance Program and to determine the effectiveness of the program.
- 18.2 A semiannual audit schedule of internal and external audits is published which lists the organization to be audited with a WVNS qualified lead auditor identified. Audits are planned and scheduled taking into consideration the complexity, safety, importance and significance of the activities being performed. Audits are initiated early enough to assure effective quality during installation, equipment maintenance, modification, inspection, testing, processing and storage of the canistered waste form. Internal audits shall be performed at least annually. Internal and external audit frequency will be determined by results of previous audits, results of audits from other sources, previous experience, surveillances and inspections, or significant changes in an organizations Quality Assurance Program or personnel. External audits of supplier's quality assurance programs shall be evaluated for audit on at least an annual basis. Supplier audits shall be performed on a triennial basis when supplemented by documented annual evaluations.

- 18.3 Supplier audits may not be necessary for procuring items that are relatively simple in design, are manufacturer tested, are adaptable to standard or automated inspection, or are end use tested to verify quality characteristics after delivery. The rationale for not performing an external audit shall be documented and maintained as a part of the Quality Assurance records.
- 18.4 Audits are conducted in accordance with written checklists prepared by appropriately trained, indoctrinated, and qualified personnel who are technically competent in the areas being audited, and who audit under the direction of a qualified lead auditor. Audit personnel do not have direct responsibility in the area being audited, and shall include appropriately qualified representatives in the technology being audited. Management at all levels within the WVNS organization shall be actively involved in the audit process.
- 18.5 Audit findings and observations are technically evaluated and analyzed by the audit team, documented, reported to, and reviewed by WVNS management responsible for the area audited, and issued to the audited organization for identification of cause and corrective action. A documented reply is required describing identified cause and corrective actions taken or to be taken.
- 18.6 Follow up actions including tracking of findings, are conducted by Quality Assurance personnel until all corrective actions have been closed out. A formal audit closeout letter is then issued. Completed audit records including audit plans, audit reports, written replies, and the record of completion of corrective action are transferred to the MRC (Master Records Center) for records management and retention.

18.7 Quality Assurance includes the results of audits in the analysis and reporting of quality trends, see also section 2.11.

19.0 COMPUTER SOFTWARE

19.1 A WVNS program has been established to ensure that computer software used for high level waste acceptance development, qualification, and production activities is developed, qualified, controlled, and used in compliance with DOE/RW-0214 requirements.

19.2 The procedures established, documented, and implemented for application of the WVNS computer software control program provide the following:

- a. Software to be controlled is identified in the Waste Form Compliance plan, and is documented. The documentation appropriately reflects the provisions of the Nuclear Regulatory Commission NUREG-0856 "Final Technical Position on Documentation of Computer Codes for High-Level Waste Management".
- b. Computer software controls pertaining to the control of software that is essential to meeting the Waste Acceptance Specification are consistent with the requirements of DOE/RW-0214, Section 19.0, with specified exceptions to NQA-1 supplement 11 S-2. WVNS procedural controls are established to provide:
 1. A Computer Software Quality Assurance Plan (SQAP).
 2. Computer Software Verification and Validation.
 3. Computer Software Configuration Management.

4. Qualification of Existing Software.
5. Computer Software Documentation
6. Computer Software Development Reviews.
7. Discrepancy Reporting and Corrective Action.
8. Media Control and Physical Security.
9. Control of Acquired Computer Software.
10. Control of Computer Software Application

APPENDIX A
MATRIX TABLE OF IMPLEMENTING PROCEDURES

<u>HQA-1 REQUIREMENTS</u>	<u>RW-0214 REQUIREMENT</u>	<u>CONTROLLING PROCEDURES</u>
<u>1.0 ORGANIZATION</u>	1.0 General	QM 1 and WV-120
	1.1 QA Program Management	QM 1 and WV-120
IS-1	1.2 Delegation of Work	QM 1
	1.3 Dispute Resolution	QM 1
	1.4 Resolution of Allegations	WV-990
	1.5 Stop Work Provisions	QM 1
<u>2.0 QA PROGRAM</u>	2.0 General	QM 2
	2.1 QA Program	QM 1 & QM 2
2S-1	2.2 Reporting Independence	QM 1 & QM 2
2S-2	2.3 Planning	QM 2 & 3, QAP 2-5
2S-3	2.4 Readiness Reviews (including appendix B, 2.2)	QM 2
2S-4	2.5 Graded QA Program (including appendix B, 2.3)	QM 2 & QM 3
2A-1	2.6 Policy statement	
2A-3	2.7 QA Requirements and Matrix	
	2.8 Personnel Selection, Indoctrination, Training, Qualification (including appendix B, 2.4)	QMs 2-1, 2-2, 2-3, WV-538, WV-368, & WV-730
	2.9 Surveillance	QAP 10-3
	2.10 Management Assessment (including appendix B, 2.5)	QM 2-4
	2.11 QA Program Reporting and Tracking	QM 2 & QAP 2-4
	2.12 Qualification of Date of Indeterminate Quality	QM3-2, EP-3-019
	Appendix B, 2.1 - Method Description	WVDP-074, appendix 1
<u>3.0 DESIGN CONTROL</u>	3.0 General	All EPs, QAPs 3-1, 2, 3
	3.1 Design Error and Deficiency Control	QM 3
3S-1	3.2 Design Changes	QM 3 & EP-3-007
	3.3 Design Verification	QM 3-3 & EP-3-020
	3.4 Technical Reviews	QM 3-3 & EP-3-011
	3.5 Peer Reviews	QM 3-3 & EP-3-020
	Appendix B, 3.1 Control of Experiments	QM 3-4, 11 & EP-3-007, EP-11-003

<u>NQA-1 REQUIREMENTS</u>	<u>RW-0214 REQUIREMENT</u>	<u>CONTROLLING PROCEDURES</u>
4.0 <u>PROCUREMENT</u> <u>DOCUMENT CONTROL</u> 4S-1	4.0 General 4.1 Review 4.2 Applicability or Purchaser's QA Program	QM 4 & WV-361 & WV-602 QM 4-1, QAP 4-1 & 4-2, & EP-3-007 QM 4-1 & WV-620
5.0 <u>INSTRUCTIONS,</u> <u>PROCEDURES, AND</u> <u>DRAWINGS</u>	5.0 General 5.1 Reviews 5.2 Quality Assurance Records	QM 5, QAP 5-1, WV-100, EP-3-005 & EP-5-001 QM, QAP, EP, & WV Manual Indices
6.0 <u>DOCUMENT CONTROL</u> 6S-1	6.0 General 6.1 Control System 6.2 Controlled Documents 6.3 QA Organizational Review	QM 6, WV-100, & EP-6-001, WV-107 & QAP 6-1, WV-102 & EP-3-005 & EP-3-011 WV-103
7.0 <u>CONTROL OF</u> <u>PURCHASED ITEMS</u> <u>AND SERVICES</u> 7S-1	7.0 General 7.1 Supplier's QA Program 7.2 Receipt Inspection Planning 7.3 Receipt Inspection Records	QMs 7 & QM 7-1, QAPs 7-1 & 7-4, QAP 7-2 & WV-602 QM 4-1, QM-7, & QAP 10-2 QM17, & QAP 17-1
8.0 <u>IDENTIFICATION</u> <u>AND CONTROL</u> <u>OF ITEMS</u> 8S-1	8.0 General	QM 8, QAP 8-1, WV-620, & EP-8-001

<u>NQA-1 REQUIREMENTS</u>	<u>RW-0214 REQUIREMENT</u>	<u>CONTROLLING PROCEDURES</u>
9.0 <u>CONTROL OF PROCESSES</u> 9S-1	9.0 General (including appendix B, 9.0) 9.1 List of Special Processes 9.2 QA Organization Involvement 9.3 Evidence of Accomplishment	QM 9, QAPs 9-1, 2, & 3 QM 9 QM 9 QM 9 & QAP 9-3
10.0 <u>INSPECTION</u> 10S-1	10.0 General 10.1 Inspection Planning 10.1 Records	QM 10 QM 10 & QAP 10-1 QAPs 10-1 & 10-2
11.0 <u>TEST CONTROL</u> 11S-1	11.0 General 11.1 Uncertainty and Error 11.2 Test Planning	QM 11 & QAP 11-1 EP-11-001 & EP-11-003 QM 11
12.0 <u>CONTROL OF MEASURING AND TEST EQUIPMENT</u> 12S-1	12.0 General 12.1 Calibration Standards	QM 12 QM 12 & QAP 12-1
13.0 <u>HANDLING, STORAGE, AND SHIPPING</u> 13S-1	13.0 General Appendix B, 13.1 Archival of Samples	QM 13, WV-650 & WV-652 QM 13-1, WV-660, & WV-690
14.0 <u>INSPECTION, TEST, AND OPERATING STATUS</u>	14.0 General 14.1 Sequence of Operations	QM 14, QAP 14-1, WV-368, & SOP 00-4

<u>NQA-1 REQUIREMENTS</u>	<u>RV-0214 REQUIREMENT</u>	<u>CONTROLLING PROCEDURES</u>
15.0 <u>CONTROL OF NONCONFORMING ITEMS</u> 15S-1	15.0 General 15.1 Closure 15.2 Nonconformance Disposition	QM 15 & QAP 15-1 & QAP 15-2, WV-222, QAP 15-3
16.0 <u>CORRECTIVE ACTION</u>	16.0 General 16.1 Trend Analysis 16.2 Corrective Action for Significant Conditions Adverse to Quality 16.3 Deficiencies 16.4 Remedial Action	QM 16, QAP 16-1, QAP 2-4 WV-987
17.0 <u>QA RECORDS</u> 17S-1	17.0 General 17.1 Quality Assurance Records Appendix B, 17.0 Quality Assurance Records	QM 17, QAP 17-1, WV-730, & EP-17-001 QM 17
18.0 <u>AUDITS</u> 18S-1	18.0 General 18.1 Technical Considerations 18.2 Analysis of Audits 18.3 Internal Audits 18.4 External Audits Appendix B, 18.0 Quality Assurance Audits	QM 18, QAP 18-1 QM 18 QM 18 QM 18 QM 18 QM 18

HQA-1 REQUIREMENTS	RW-0214 REQUIREMENT	CONTROLLING PROCEDURES
19.0 <u>COMPUTER SOFTWARE</u> 11S-2	19.0 Application Requirements 19.1 Computer Software Quality Assurance Plan 19.2 Computer Software Verification and Validation 19.3 Verification 19.4 Validation 19.5 Computer Software Configuration Management 19.6 Qualification of Existing Software 19.7 Documentation 19.8 Reviews 19.9 Discrepancy Reporting and Corrective Action 19.10 Media Control and Physical Security 19.11 Acquired Computer Software 19.12 Computer Software Application Appendix B, 3.3 Computer Software Design & Control	QM3-1 & EP-3-013 thru EP-3-018

APPENDIX I

QUALITY ACTIVITIES LIST FOR WVDP QA PROGRAM

Waste form production items and activities essential to certification and acceptance of canistered waste forms that require control in accordance with the quality assurance program will include the following, as appropriate:

1. Qualification of the Production Process - Included are those items and activities that shall be established, controlled, or accepted for waste form qualification in accordance with quality assurance program and engineering requirements. Individual items and activities will be identified by waste qualification documentation. General categories include:
 - essential process control specifications and limits;
 - essential system equipment, material, fabrication, and construction acceptance criteria;
 - essential equipment and system configuration;
 - qualification of production procedures;
 - criteria for qualification of production personnel;
 - feed composition specifications and limits;
 - process chemical specifications (frit, etc.); and
 - product measurement and acceptance criteria.
2. Control of Production - Included are those items and activities to be controlled or accepted in accordance with project quality assurance program requirements. Individual items and activities, including associated acceptance criteria, will be determined and documented in accordance with the items and activities identified by the waste form qualification program. A readiness review program will be established and conducted to assure readiness and adequacy of identified production controls. General categories include:

- feed composition parameters;
- procurement and control of feed chemicals (frit, etc.);
- accuracy, calibration, and control of process instrumentation;
- procedure control and procedure compliance (process control);
- personnel qualification and correct job assignment;
- procurement and control of canister and canister materials;
- identification and handling of essential items and materials;
- canister closure welding;
- product and production records;
- plant and equipment maintenance and modification; and
- handling and storage of finished product.

3. Acceptance of the Final Product - Included are inspection and test activities and associated items that are necessary for final product acceptance. Criteria for this acceptance will be established and identified as early as the qualification of the production process and revised subsequently as required. General categories include:

- inspection and product acceptance test planning;
- in-process test and inspection;
- non-destructive examination and finished product inspection (seal test, etc.);
- qualification and correct job assignment of inspection and acceptance test personnel;
- accuracy, calibration, and control of M&TE; and
- measurement, test, and inspection records.

4. Documentation of Specific Requirements - The applicable points shall be specified in the Waste Form Qualification Report submittals, process control plans, and/or operating schedules, as appropriate.

APPENDIX II

GLOSSARY FOR

WEST VALLEY DEMONSTRATION PROJECT

QUALITY ASSURANCE PROGRAM

Acceptance Criteria - specified limits placed on characteristics of an item, process or service defined in codes, standards, or other requirement documents. (NQA-1)

Activities Affecting Quality - include siting, designing, purchasing, fabricating, bundling, shipping, receiving, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, and decommissioning. (NUREG 1318, 10 CFR 60)

Audit - a planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence the adequacy of and compliance with established procedures, instructions, drawings, and other applicable documents, and the effectiveness of implementation. An audit should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance. (NQA-1)

Baseline - (noun) A set of criteria or critical observations or data that are under change and distribution control and are used for comparison or as a control. (verb) The act of formally approving and accepting a set of criteria or critical observations or data for use as a comparison or as a control.

Calibration - the process of comparing an instrument or device to a (nationally recognized) appropriate standard, and:

- a) adjusting the instrument so that the accuracy of its readings is within approved tolerances, or
- b) recording the corrections in properly identified calibrations reports.
(QM-19)

Canister - the metal vessel into which borosilicate waste glass is poured during waste form fabrication.

Canistered Waste Form - the waste form and the surrounding canister as well as any secondary canisters applied by the producer. (RW-0214)

Causative Process - an exercise of management authority that causes an action to be performed through the issuance of an order, a letter, and/or a purchase contract. The causative process takes precedence over procedures by causing them at lower levels to be; 1) brought into being, 2) performed at specific times, 3) superseded, and 4) changed to become more effective.

Certificate of Conformance - a document signed or otherwise authenticated by an authorized individual certifying the degree to which the items or services meet specified requirements. (NQA-1)

Certification - the act of determining, verifying, and attesting in writing to the qualifications of personnel, processes, procedures, or items in accordance with specified requirements. (NQA-1)

Characteristic - any property or attribute of an item, process or service that is distinct, describable, and measurable. (NQA-1)

Computer Software Code (Scientific and Engineering) - instructions written in a computer language for the processing of mathematical models developed for use in scientific and engineering analysis, design, safety analysis, process or equipment control and other activities dependent upon a computer for solution or control. Computer software code development includes preparation of instructions for the input data format and use of the code. (See Essential Software for Waste Acceptance Process Activities.)

Computer Software Validation - The process that demonstrates that the mathematical model embodied in the computer software is a correct representation of the process or system for which it is intended. (RW-0214)

Computer Software Verification - The process that demonstrates that the computer software correctly performs its stated capabilities and functions. (RW-0214)

Condition Adverse to (Required) Quality - an all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, and nonconformances. A significant condition adverse to quality is one which, if uncorrected, could have a serious effect on safety or operability. (NQA-1)

Containers (Radioactive Shipments) (QM-19)

Type A - meet WVNS approved design and performance specifications (in compliance with Department of Transportation Specification), and are certified by the builder. These containers are quality level C.

Type B - are engineered to meet DOT design and performance specifications; hypothetical accident conditions as specified in 49 CFR 173.398, and are reviewed by USDOE with approval evidenced by a "Certificate of Compliance." These containers are quality level A or B, depending on the end use.

Contractor - the individual or organization entering into a contract, subcontract or purchase order issued by the purchaser. (QM-19)

Controlled Work Area - an area to which the access of personnel, tools, and materials is limited and physically controlled. (QM-19)

Contamination - material that is not an inherent part of the components such as grit, metal particles, oil, grease, slag, scale, residual films, soil and unspecified preservative or paint. (QM-19)

Corrective Action - measures taken to rectify conditions adverse to (required) quality and, where necessary, to preclude repetition. (NQA-1)

Design - The specifications, drawings, criteria, performance requirements, or similar documents that define the technical requirements and configuration of the natural and engineered structures, systems, components, and barriers of the MGDS, MRS facility, transportation cask system, waste form, and Federal interim storage facility.

The act of defining the above technical requirements at each developmental stage of the final design (that is, from conceptual design through final design). Design control measures are exercised at each stage of the design.

Design information - This includes the data collection and analysis activities that are used in supporting design development and verification. This includes general plans and detailed procedures for the data collection and analyses and related information such as tests results and analyses. Data analysis includes the initial step of data reduction as well as broad-level system analysis, such as performance assessments, which integrate many other data and analysis of individual parameters. (RW-0214)

Design Activities - Activities related to the design process, including data collection and analysis activities that are used in supporting design development and verification. (RW-0214)

Design Change - any revision or alteration of the technical requirements defined by approved and issued design output documents and approved and issued changes thereto. (NQA-1)

Design Input - those criteria, parameters, bases, or other design requirements upon which detailed final design is based. (NQA-1)

Design Output - Drawings, specifications, and other documents, used to define technical requirements of structures, systems, components, and computer programs. (NQA-1)

Design Process - technical and management processes that commence with identification of design input and that lead to and include the issuance of design output documents. (NQA-1)

Design Review - A formally documented evaluation conducted at various points during the design process that compares design documentation against applicable codes, standards, and other specifications to determine adequacy of the design and the extent to which the design conforms to stated requirements. (RW-0214)

Development Testing - the testing of material, components, features, subassemblies, systems or processes to obtain quantitative data for use in the establishment of design process parameters. (QM-19)

Deviation - a departure from specified requirements. (NQA-1)

Document - any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures, or results. A document is not considered to be a Quality Assurance Record until it satisfies the definition of a Quality Assurance Record, as defined in this appendix. (NQA-1)

Essential Software - scientific and engineering computer codes used in applications essential to meeting the Waste Acceptance Preliminary Specification (WAPS).

External Audit - an audit of those portions of another organization's Quality Assurance Program not under the direct control or within the organizational structure of the auditing organization. (NQA-1)

Failure - the inability of an item to perform within specified limits. (QM-19)

Final Cleaned Surface - the surface condition after all surface finishing and cleaning operations have been performed prior to placing the surface in service. (QM-19)

Final Design - approved design output documents and approved changes thereto. (NQA-1)

Graded Quality Assurance Program - The selective application of quality assurance program requirements and controls to items and activities commensurate with their importance to PROGRAM objectives. (RW-0214)

Guideline - a suggested practice that is not mandatory in programs intended to comply with a standard. The word "should" denotes a guideline; the word "shall" denotes a requirement. (NQA-1)

High-Level Waste - high-level radioactive waste is:

- a) Irradiated reactor fuel.
- b) Liquid wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuel.
- c) Solids into which such liquid wastes have been converted (10 CFR 60.2).

Hold Point - a point in the work sequence, designated by WVNS beyond which work may not proceed without their consent. (QM-19)

Important to Safety (As applicable to waste isolation activities) - Essential to or affecting the ability to prevent or mitigate an accident that could result in a radiation dose to the whole body, or any organ, of 0.5 rem or greater at or beyond the nearest boundary of the unrestricted area at any time until the completion of permanent closure.

Important to Waste Isolation - Essential to or affecting the ability to inhibit the transport of radioactive material so that amounts and concentrations of this material entering the accessible environment after permanent closure will be kept within limits prescribed by 10 CFR 60 and 40 CFR 191. (RW-0214)

Inaccessible Area - areas or openings in a component that are not readily accessible for cleaning or inspection during or after fabrication, and where dirt, liquids, foreign articles, or other contaminants may be trapped. (QM-19)

Independent (Personnel) - a condition characterizing an individual or group of individuals who are qualified to analyze, review, inspect, test audit, or otherwise evaluate activities and work results because:

- a) they had no direct responsibility for or involvement in performing the activity or work,
- b) they are not accountable for the activity or work result, and
- c) they do not report directly to the immediate supervisor who is responsible for performing the activity of work being evaluated.

Indoctrination - Instruction or reading requirements to familiarize personnel in basic principles or elements or a fundamental skill. (RW-0214)

Inspection - examination or measurement to verify whether an item or activity conforms to specified requirements. (NQA-1)

Inspector - a person who performs inspection activities to verify conformance to specific requirements. (NQA-1)

Interface - the identifiable point of connection or coordination between two or more defined entities, which must be properly coordinated for successful operation. Entities may be either physical items or organizations. (QM-19)

Internal Audit - an audit of those portions of an organization's Quality Assurance Program retained under its direct control and within its organizational structure. (NQA-1)

Item - an all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, or unit. (NQA-1)

Low-Level Waste (LLW) - those low-level radioactive wastes containing sources, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Waste Policy Act. That is, radioactive waste not classified a high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11 e.(2) of the Atomic Energy Act (uranium and thorium tailings and waste) of 10 CFR 61. (was "waste" in QM-19)

Maintainability - the combined features of equipment design and installation which facilitate the accomplishment of inspection, test, checkout, services, repair, and overhaul. (QM-19)

Major Participant Organizations - those organizational units of DOE and the Operating Contractor that are associated through organizational, administrative, or contractual arrangements and together form a waste form producer organization.

Measuring and Test Equipment (M&TE) - devices or systems used to calibrate, measure, gage, test, or inspect in order to control or to acquire data to verify conformance to specified requirements. (NQA-1)

Model A system of postulates, data, and inferences, presented as a mathematical description of an entity, state of affairs, process, or system. (RW-0214)

Nonconformance - a deficiency in characteristic, documentation, or procedure that renders the quality of an item or activity unacceptable or indeterminate. (NQA-1)

Objective Evidence - any documented statement of fact, other information, or record, either quantitative or qualitative, pertaining to the quality of an item or activity, based on observations, measurements, or tests which can be verified. (NQA-1)

Overview - an analysis and assessment by management of the scope, status, adequacy, and effectiveness of quality achievement and assurance activities. Overview encompasses management assessments, technical reviews, readiness reviews, audits, and surveillances, as appropriate.

Peer Review - a peer review is a documented, critical review performed by peers who are independent of the work being reviewed. The peer's independence from the work being reviewed means that the peer, a) was not involved as a participant, supervisor, technical reviewer or advisor in the work being reviewed, and b) to the extent practical, has sufficient freedom from funding considerations to assure the work is impartially reviewed.

A peer review is an in-depth critique of assumptions, calculations extrapolations, alternate interpretations, methodology, and acceptance criteria employed, and of the conclusions drawn in the original work. Peer reviews confirm the adequacy of work. In contrast to peer review, the term "technical review", refers to a review to verify compliance to predetermined requirements; industry standards; or common scientific, engineering, and industry practice. (NUREG-1297)

Procedure - a document that specifies or describes how an activity is to be performed. (NQA-1)

Procurement Document - Procurement requests, purchase orders, drawings, contracts, specifications, or instructions used to define requirements for purchase and broadly interpreted by OCRWM to include program guidance letters, work orders, work authorization letters, store orders, memoranda of understanding, field task proposals/agreements, and interagency agreements. Procurement documents or revisions thereto which do not modify the scope of an item or activity to which the QA program is applied are not subject to procurement controls delineated in the QA program. Where modifications to procurement documents include the addition of quality assurance or technical requirements and the item or activity is subject to quality assurance program

controls, the procurement documents are subject to review by the quality assurance and affected technical organization. (RW-0214)

Production Records (PR) - the documentation, provided by the producer, that describes the actual canistered waste forms and certifies compliance with the Waste Acceptance Preliminary Specification (WAPS).

Program - activities not directly related to the construction or modification of a facility, such as research and development, manufacturing, production, maintenance, and testing. (ID 5700.6)

project - activities related to the construction or modification of a facility and its associated safeguards and utilities. (ID 5700.6)

Project, the - the West Valley Demonstration Project.

Purchaser - the organization responsible for establishment of procurement requirements and for issuance, administration, or both, of procurement documents. (NQA-1)

Q-List (Quality List) - a list of structures, systems, and components that have been determined to be important to safety and engineered barriers that have been determined to be important to waste isolation. (RW-0214)

Quality Activities List: - in the geologic repository program, a list of those major activities conducted during site characterization, construction, operation, or closure that relate to natural barriers important to waste isolation. These activities, which must be covered under the 10 CFR Part 60 Subpart G QA program, include data gathering, performance assessments, and those activities that could affect a natural barrier's ability to isolate waste. (NUREG-1318)

As applied to the WVDP High-Level Waste Form Production, the Quality

Activities List would include those waste form production items and activities essential to certification and acceptance of canistered waste forms.

Quality Achievement - the act of attaining or exceeding a degree of excellence.

Qualification (Personnel) - the characteristics or abilities gained through education, training, or experience, as measured against established requirements, such as standards or tests, that qualify an individual to perform a required function. (NQA-1)

Qualified Procedures - an approved procedure that has been demonstrated to meet the specified requirements for its intended purpose. (NQA-1)

Quality Assurance (QA) - all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. (NQA-1)

Quality Assurance Program - a documented description of the controls used for achieving and verifying quality. (RW-0214)

Quality Assurance Program Description (QAPD) - a document which identifies the requirements that are applicable to a particular program or project, and provides an index, matrix, or description of the procedures that implement these and any necessary supplementary requirements. The document also includes specific responsibilities and authorities for its implementation.

Quality Control - the quality assurance actions that control the attributes of the material, process, component, system or facility in accordance with predetermined quality requirements. (QM-19)

Quality Assurance Record - a completed document that furnishes evidence of the quality of items and/or activities affecting quality. (NQA-1)

Readiness Review - an independent, systematic, documented review to determine, and inform management of, the readiness to advance from one phase, process, or activity in to another. Readiness reviews are used to coordinate many elements, to provide attention to detail, and to assure that the project is ready to proceed to the comprehensive review of a total project or a particular segment of the project. (RW-0214)

Receiving - taking delivery of an item at a designated location. (NQA-1)

Reject - a decision that a nonconforming item cannot be accepted as-is, reworked, or repaired. Rejected items are either scrapped or returned to the suppliers, as appropriate. (QM-19)

Repair - the process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still does not conform to the original requirement. (NQA-1)

Rework - the process by which an item is made to conform to original requirements by completion or correction. (NQA-1)

Right of Access - the right of a purchaser or designated representative to enter the premises of a supplier for the purpose of inspection, surveillance, or quality assurance audit. (NQA-1)

Secondary Canister - a sealed metal vessel that is applied by the producer and completely surrounds the waste form and its canister.

Service - the performance of activities such as design, fabrication, inspection, nondestructive examination, repair, or installation. (NQA-1)

Software - see computer software code.

Special Process - a process, the results of which are highly dependent on the control of the process or the skill of the operators, or both, and in which

the specified quality cannot be readily determined by inspection or test of the product. (NQA-1)

Supplier - any individual or organization who furnishes items or services in accordance with a procurement document. An all-inclusive term used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, consultant, and their subtier levels. (NQA-1)

Surveillance - the act of monitoring or observing to verify whether an item or activity conforms to specified requirements. (NQA-1)

Technical Review - a documented, traceable, in-depth, critical review, of documents, materials or data that fall within the state of the art, conducted to evaluate (both) its applicability, correctness, adequacy, and completeness. Technical reviews are performed by qualified personnel with technical expertise at least equivalent to those who conducted the original work, and who are independent of those who conducted the work being reviewed. (RW-0214)

Testing - an element of verification for the determination of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions. (NQA-1)

Traceability - the ability to trace the history, application, or location of an item and like items or activities by means of recorded identification. (NQA-1)

Training - in-depth instruction or practice or both to develop or maintain proficiency in a subject or activity. Such instruction may be internal or external classroom sessions, courses or informal on-the-job assignments.

Use-As-Is - a disposition permitted for a nonconforming item when it can be established that the item is satisfactory for its intended use. (NQA-1)

User - the person who uses or installs or instructs the use and installation for its intended purpose of the work under review. (QM-19)

Validation - the documented confirmation of the adequacy (suitability for its intended purpose) of the work under review.

Verification - the act of reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements. (Also, the documented determination that work under review conforms to specified requirements). (NQA-1)

Verification Point - a point in the work sequence that may be examined at any time after completion of the work; usually verification is after-the-fact while witness is during the operation. (see hold point) (QM-19)

Vitrification Project - the overall activities occurring at or on behalf of the West Valley Demonstration Project that support the Waste Acceptance Process. (QAPD)

Waiver - documented authorization to depart from specified requirements. (NQA-1)

Warehouse - the facility responsible for receiving, maintaining storage, and issuing items. (QM-19)

Waste Acceptance Process Activities - the activities through which documentation and data are collected and prepared to support compliance with the Waste Acceptance Preliminary Specification (WAPS), PE-04. This includes activities associated with: research and development that is essential to qualification of the waste form; control of materials, equipment, facilities, and processes that are essential to the certification of canistered waste forms; and processing operations that are essential to the certification of canistered waste forms.

Waste Acceptance Preliminary Specifications (WAPS), PE-04 - the document that describes and identifies the properties and requirements the HLW form must meet in order to be accepted for disposal in a federal repository.

Waste Form - the radioactive waste materials and any encapsulating or stabilizing matrix, such as borosilicate glass.

Waste Form Compliance Plan (WCP) - the document that describes the producer's plan for demonstrating compliance with each Waste Acceptance Specification in the WAPS. The WCP includes descriptions of the tests, analyses, and process controls to be performed by the producer.

Waste Form Qualification Report (WQR) - a compilation of results from waste form testing and analysis that develops in detail the case for compliance with each Waste Acceptance Preliminary Specifications (WAPS).

Witness Point - a point in the work sequence that is identified by WVNS in test procedures, travelers or work instructions. WVNS must be notified to witness inspection, examination, or test. Such points apply to in-process activities for convenience toward assurance that the end item will be acceptable. Work may proceed if WVNS is not readily available, and such written release is not required. (QM-19)

APPENDIX III

ACRONYMS

<u>ACRONYM</u>	<u>DEFINITION</u>	<u>PAGE*</u>
AM-(DOE-ID)-ER&WM	Assistant Manager (DOE-ID) Environmental Restoration & Waste Management	10
ANSI	American National Standards Institute	102
ASL	Acceptable Suppliers List	65
ASME	(The) American Society (of) Mechanical Engineers	1
CFR	Code of Federal Regulations (example: 10 CFR 60)	6
CPAC	Center (for) Process Analytical Chemistry	109
DOE	U.S. Department of Energy	111
DOE-ID	U.S. Department of Energy, Field Office, Idaho	iv
DOE-EM	U.S. Department of Energy, Office of Environmental Restoration and Waste Management	iv
DOE-WVPO	U.S. Department of Energy, West Valley Project Office	iv
DOE-RW	Office of Civilian Radioactive Waste Management (also OCRWM)	111
DEAR	Department (of) Energy Acquisition Regulation	73
DOT	(US) Department of Transportation	AP-II-3
ECN	Engineering Change Notice	127
EP	Engineering Procedure	158
ER&WM PSO	(DOE) Environmental Restoration & Waste Management Program Support Office	14
ES&H	Environmental, Safety and Health	35
ESH&QV	Environmental, Safety, Health, and Quality Verification	54
FAR	Federal Acquisition Regulation	73
HLW	High-Level Waste	109
M&TE	Measuring and Testing Equipment	32
MCC	Material Characterization Center	109
MGDS	Mined Geologic Disposal System	AP-II-4

* - First used in document

APPENDIX III (CONTINUED)

ACRONYMS (CONTINUED)

<u>ACRONYM</u>	<u>DEFINITION</u>	<u>PAGE*</u>
MRC	Project Master Records Center	53
MRS	Monitored Retrievable Storage	AP-II-4
NDE	Nondestructive Examination	67
NR	Nonconformance Report	149
NRC	U.S. Nuclear Regulatory Commission	14
NUREG	(US) Nuclear Regulation	16
NWPA	Nuclear Waste Policy Act	102
OCRWM	(DOE) Office of Civilian Radioactive Waste Management	111
OR	Occurrence Report	150
PNL	Pacific Northwest Laboratory (Battelle Memorial Institute)	14
PFHSS	Preservation, Packaging, Handling, Shipping, Storage	146
PR	Production Records	98
Q-Level	Quality Level	113
QA	Quality Assurance	iv
QAPD	Quality Assurance Program Description	iv
QARG	Quality Assurance Review Group	1
QMM	Quality Management Manual	103
QVM	Quality Verification Manager	81
RCA	Request for Corrective Action	151
REM	Roentgen Equivalent Man	AP-II-7
SC	Site Contractor	105
SNR	Supplier Nonconformance Report	150
SNT	Society for Nondestructive Testing	141
SQAP	Software Quality Assurance Plan	156

* - First used in document

APPENDIX III (CONTINUED)

ACRONYMS (CONTINUED)

<u>ACRONYM</u>	<u>DEFINITION</u>	<u>PAGE*</u>
TRG	Technical Review Group	57
WAPS	Waste Acceptance Preliminary Specifications	111
WAS	Waste Acceptance Specification	85
WCP	Waste Form Compliance Plan	37
WHC	Westinghouse Hanford Company	14
WQR	Waste Form Qualification Report	37
WV	1) West Valley 2) Prefix to WVNS procedures	158
WVDP	West Valley Demonstration Project	111
WVNS	West Valley Nuclear Services Co., Inc.	iv
WVPO	DOE West Valley Project Office	iv
WVPO-QP	(WVPO) Quality Procedure	91

* - First used in document

**AUDIT PLAN AND SCHEDULE
DOE-EM/343 QUALIFICATION AUDIT
OF DOE WEST VALLEY PROJECT OFFICE (WVPO)**

AUDIT NUMBER: 92EA-WV-AU-001

AUDITING ORGANIZATION: Department of Energy (DOE) Headquarters
Environmental Restoration and Waste Management
Office of Waste Management
Vitrification Project Division (EM-343)

AUDITED ORGANIZATION: DOE West Valley Project Office

AUDIT DATES: July 27-31, 1992

AUDIT TEAM:

Jack Hennessey	(EM-343)	Audit Team Leader
Sidney Crawford	(BDM/SAIC)	Lead Auditor
Clark McKee	(MACTEC)	Lead Auditor
Don Miller	(BDM/SAIC)	Lead Auditor
Bud Crevasse	(MACTEC)	Auditor
John LeVea	(BDM/SAIC)	Auditor
Bill McClanahan	(BDM/SAIC)	Auditor
Bob Toro	(BDM/SAIC)	Auditor
Lew Wade	(MACTEC)	Auditor
James Conway	(EM-343)	Auditor

OBSERVERS: Later

AUDIT SCOPE:

The following program elements will be reviewed during this audit:

1. Organization
2. QA Program
3. Design Control
4. Procurement Document Control
5. Procedures and Drawings
6. Document Control
7. Control of Purchased Items (Delegated to WVNS)
8. Identification of Items (Delegated to WVNS)
9. Process Control (Delegated to WVNS)
10. Inspection (Delegated to WVNS)
11. Test Control (Delegated to WVNS)
12. Measuring and Test Equipment (Delegated to WVNS)
13. Storage/Shipping (Delegated to WVNS)
14. Operating Status (Delegated to WVNS)
15. Control of Nonconforming Items (Delegated to WVNS)
16. Corrective Action
17. QA Records
18. Audits
19. Computer Software (Delegated to WVNS)
- . Management Assessments
- . Oversight of delegated elements

AUDIT OBJECTIVES:

To evaluate the effectiveness of DOE West Valley Project Office implementation of WVDP Quality Assurance Program Description, WVDP-074, QAPD-2 and QAPD-3, and compliance with DOE/RW-0214 and DOE/EM/VO/02.

ACTIVITIES TO BE AUDITED:

QA program elements and activities related to High Level Radioactive

Waste treatment at the West Valley Demonstration Project.

APPLICABLE REQUIREMENTS/CRITERIA:

1. WVDP Quality Assurance Program Description, WVDP-074, QAPD-2
WVDP Quality Assurance Program Description, WVDP-074, QAPD-3
2. WVPO Implementing QA Program Procedures (QPs)
WVNS Implementing Quality Assurance Procedures (QAPs)
3. DOE Orders: (as applicable to QA program provisions)
 - a. 5700.6C, "Quality Assurance"
 - b. 5820.2A, "Radioactive Waste Management"
 - c. 4700.1, "Project Management System"
4. DOE/EM/VO/02, Rev 1, VPD HLW "Quality Assurance Program Description"
5. DOE/RW-0214, Rev 4 w/ ICN 4.1, "Quality Assurance Requirements Document" (QARD)
6. ASME NQA-1-1989, "Quality Assurance Requirements for Nuclear Facilities" (including applicable Supplements and Appendixes)

PRELIMINARY AUDIT SCHEDULE:

<u>Activity</u>	<u>Date</u>	<u>Time</u>
Preaudit Meeting	07/27/92	08:30a - 09:00a
Conduct Audit	07/27/92	09:00a - 04:00p
Conduct Audit	07/28/92	08:00a - 04:00a
Conduct Audit	07/29/92	08:00a - 04:00p
Conduct Audit	07/30/92	08:00a - 04:00p
Prepare Audit Summary	07/31/92	08:00a - 11:00a
Postaudit Meeting	07/31/92	11:00a - 12:00n

- Note: 1. A brief facility walkthrough/tour is requested following the preaudit meeting for audit team and observer orientation.
2. Audit Team caucuses will be held daily from 04:00p to 04:30p to discuss areas of nonconformance, areas of concern, and audit progress.
3. Management briefings will be held with WVPO/WVNS management personnel daily from 08:00a to 08:30a to discuss areas of nonconformance and areas of concern identified by the Audit Team.

PREPARED: John E. Hammer
Audit Team Leader

DATE: 7/6/92

APPROVED: James T. Conway
QA Program Manager

DATE: 7/7/92

memorandum

DATE: JUL -2 1992

REPLY TO
ATTN OF: EM-343

SUBJECT: Audit Team Meeting Minutes

TO: Distribution:

A meeting of the Audit Team for the West Valley audit (to be conducted from July 27 through July 31) was held in the 3rd floor conference room of Trevion I.

All team members except L. Wade were in attendance, along with T. McIntosh and D. Stockman. Copies of the proposed team and assignments were distributed (see attachment) Assignments were discussed, but no changes were made.

Copies of the draft audit notification letter were also distributed and discussed. This letter will go out on July 6. The starting time for the audit was changed to 8:30 a.m. to allow for security processing at West Valley. Don Horton, RW-3, was added to the distribution list. RW will notify NRC and the State of Nevada, who will probably send observers. Logistics for the audit were also discussed.

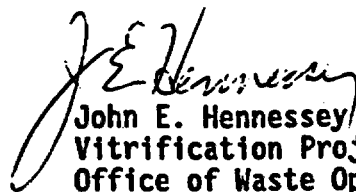
Bob Toto will reserve a block of rooms at the Holiday Inn in Hamburg, N.Y., (716-649-0500) but individuals will make their own reservations. Bob will try to get free use of a conference room at the Holiday Inn for a conference on Sunday night at 8:00p.m. and the final team caucus on Thursday night from 6:00p.m. till midnight. Bob will provide tax exempt certificates which all team members may use to avoid paying N.Y. state tax. He will also provide a map of the area.

All sub-team leaders was requested to prepare an audit checklist for their assigned areas, and submit their input to Bob Toro by July 10. The teams were reminded that the checklist will now become a quality record in accordance with Standard Practice Procedure (SPP) 4.02.

All members will receive a copy of the audit notifications letter and the audit plan.

All members were also directed to review the SPP's applicable to the elements they will be auditing, as well as SPP 4.02 and 3.03 related to audits. A reading list certifying that each auditor has read the related SPP's will be prepared by BDM and included in each auditor's qualifications file.

A brief tour (limited to 1 hour) of the West Valley facility will be arranged on Monday morning.



John E. Hennessey
Vitrification Projects Branch
Office of Waste Operations
Environmental Restoration and
Waste Management

Attachment

Distribution:

T. McIntosh, EM-343
R. Stockman, PDC
All Audit Team Members

TENTATIVE EM-343 DAILY AUDIT TEAM AGENDA
AUDIT NO. 92EA-WV-AU-001

AUDIT SUB-TEAM "A" J. T. Conway, EM-343 C. McKee, MACTEC J. LeVea, BDM/SAIC	Monday 7/27	Tuesday 7/28	Wednesday 7/29	Thursday 7/30	Friday 7/31
	MORNING:	MORNING:	MORNING:	MORNING:	MORNING:
	Pre-Audit Meeting Organization QA Program	Organization QA Program	Instructions, Procedures, & Drawings Document Control	QA Records	FOLLOW-UP Draft Findings Post-Audit Meeting
	AFTERNOON:	AFTERNOON:	AFTERNOON:	AFTERNOON:	AFTERNOON:
	Organization QA Program Team Caucus	Organization QA Program Team Caucus	Instructions, Procedures, & Drawings Document Control Team Caucus	QA Records Follow-Up on All Areas Team Caucus	

TENTATIVE EM-343 DAILY AUDIT TEAM AGENDA
AUDIT NO. 92EA-WV-AU-001

AUDIT SUB-TEAM "B" S. Crawford, BDM/SAIC R. Toro, BDM/SAIC	Monday 7/27	Tuesday 7/28	Wednesday 7/29	Thursday 7/30	Friday 7/31
	MORNING:	MORNING:	MORNING:	MORNING:	MORNING:
	Pre-Audit Meeting Design Control Procurement Document Control	Design Control Procurement Document Control Control of Purchased Items & Services	Corrective Action Audits	Software QA	FOLLOW-UP Draft Findings Post-Audit Meeting
	AFTERNOON:	AFTERNOON:	AFTERNOON:	AFTERNOON:	AFTERNOON:
	Design Control Procurement Document Control	Control of Purchased Items & Services	Corrective Action Audits	Follow-Up on All Areas	
	Team Caucus	Team Caucus	Team Caucus	Team Caucus	

TENTATIVE EM-343 DAILY AUDIT TEAM AGENDA
AUDIT NO. 92EA-WV-AU-001

AUDIT SUB-TEAM "C" D. Miller, BDM/SAIC J. E. Hennessey, EM-343 L. Wade, MACTEC	Monday 7/27	Tuesday 7/28	Wednesday 7/29	Thursday 7/30	Friday 7/31
	MORNING: Pre-Audit Meeting Control of Purchased Items & Services	MORNING: Inspection Test Control Control of M&TE	MORNING: Insp., Test & Operating Status Handling, Storage, & Shipping Control of Nonconforming Items	MORNING: Handling, Storage, & Shipping Control of Nonconforming Items	MORNING: FOLLOW-UP Draft Findings Post-Audit Meeting
	AFTERNOON: Control of Purchased Items & Services ID & Control of Items Control of Processes Team Caucus	AFTERNOON: Inspection Test Control Control of M&TE Team Caucus	AFTERNOON: Insp., Test & Operating Status Handling, Storage, & Shipping Control of Nonconforming Items Team Caucus	AFTERNOON: Follow-Up on All Areas Team Caucus	AFTERNOON:

AGENDA FOR PRE-AUDIT CONFERENCE

AUDIT 92EA-WV-AU-001

- **WELCOME AND INTRODUCTIONS**
- **ROUTE ATTENDANCE LIST**
- **DISCUSS AUDIT SCOPE**
- **DISCUSS AUDIT TEAM ASSIGNMENTS**
- **DISCUSS USE OF AUDIT TEAM CHECKLISTS**
- **DISCUSS SCHEDULE OF DAILY ACTIVITIES**
 - **AGENDA FOR EACH AUDIT TEAM**
 - **DAILY AUDIT TEAM CAUCUS @ APROX. 4:00 PM**
 - **DAILY MINI-BRIEFING @ APPROX. 8:00 AM**
 - **POST-AUDIT CONFERENCE: 11:00 AM, 7/31/92**
- **OBSERVER PROTOCOL**
- **CATEGORIZATION OF AUDIT RESULTS**
- **OPEN FOR QUESTIONS AND ANSWERS**

SCOPE OF AUDIT

92EA-WV-AU-001

**THE AUDIT WILL EVALUATE THE DOE-ID WVPO
(INCLUDING WVNS) QA PROGRAM WITH RESPECT TO:**

- **OVERALL ADEQUACY**
- **COMPLIANCE**
- **EFFECTIVENESS OF IMPLEMENTATION**
- **PREVIOUSLY DEFINED PROBLEMS**

THE CONTROLLING DOCUMENTS FOR THE AUDIT ARE:

- **WVDP QAPDs, WVDP-074, QAPD-2 & QAPD-3**
- **WVPO QPs & WVNS QAPs**
- **EM-343 QAPD (DOE/EM/WO/02, REV. 2)**
- **DOE/RW-0214, REV.4 W/ ICN 4.1**
- **DOE ORDERS 5700.6C, 5820.2A, & 4700.1**
- **ASME NQA-1-1989**

Definition of "Qualified QA Program"

- The Field Office program meets requirements, is working, and has been formally accepted as such by EM-343
- The FO's QA Program encompasses those of the M&O contractor and subcontractors. Thus, there is only one "qualification" per site.



Definition of "Qualified QA Program" (Cont'd)

Prerequisites for QA Program Qualification

- QA Program documents for each organization level meeting the requirements of RW-0214, Rev. 4, and ICN 4.1 are in place (QAPD and Implementing Procedures)
 - FO QAPD - Accepted by EM-343
 - M&O QAPD - Accepted by EM-343
 - Lower Level Contractor QAPD - Accepted by FO/M&O
- Implementing procedures include project management and technical procedures necessary to implement the QA Program
- Organizations are in place and adequately staffed for current activity
- Training to QAPDs and implementing procedures has been achieved
- Procedures are being implemented



Definition of "Qualified QA Program" (Cont'd)

Prerequisites for QA Program Qualification (continued)

- **Each organizational level has implemented a system of reviews, evaluations, and assessments**
- **Backlogs of open items are being aggressively closed**
- **Procedures are in place to qualify existing data**
- **Each organizational level has conducted a recent management assessment**

Note: QA Program Qualification applies only to waste acceptance related activities.



Methodology For Qualification

Qualification - Final Process

- All prerequisites completed by Field Offices
- EM-343 performs final qualification audits/surveillance

Note: This is an assessment primarily of the completion of prerequisites

RW, NRC and the State of Nevada may act as observers to overview the qualification process

- Assess significance of findings and track response and resolution
- Reach point where no significant findings remain unresolved
- EM-343 effects qualification through formal acceptance of the Field Office QA Program



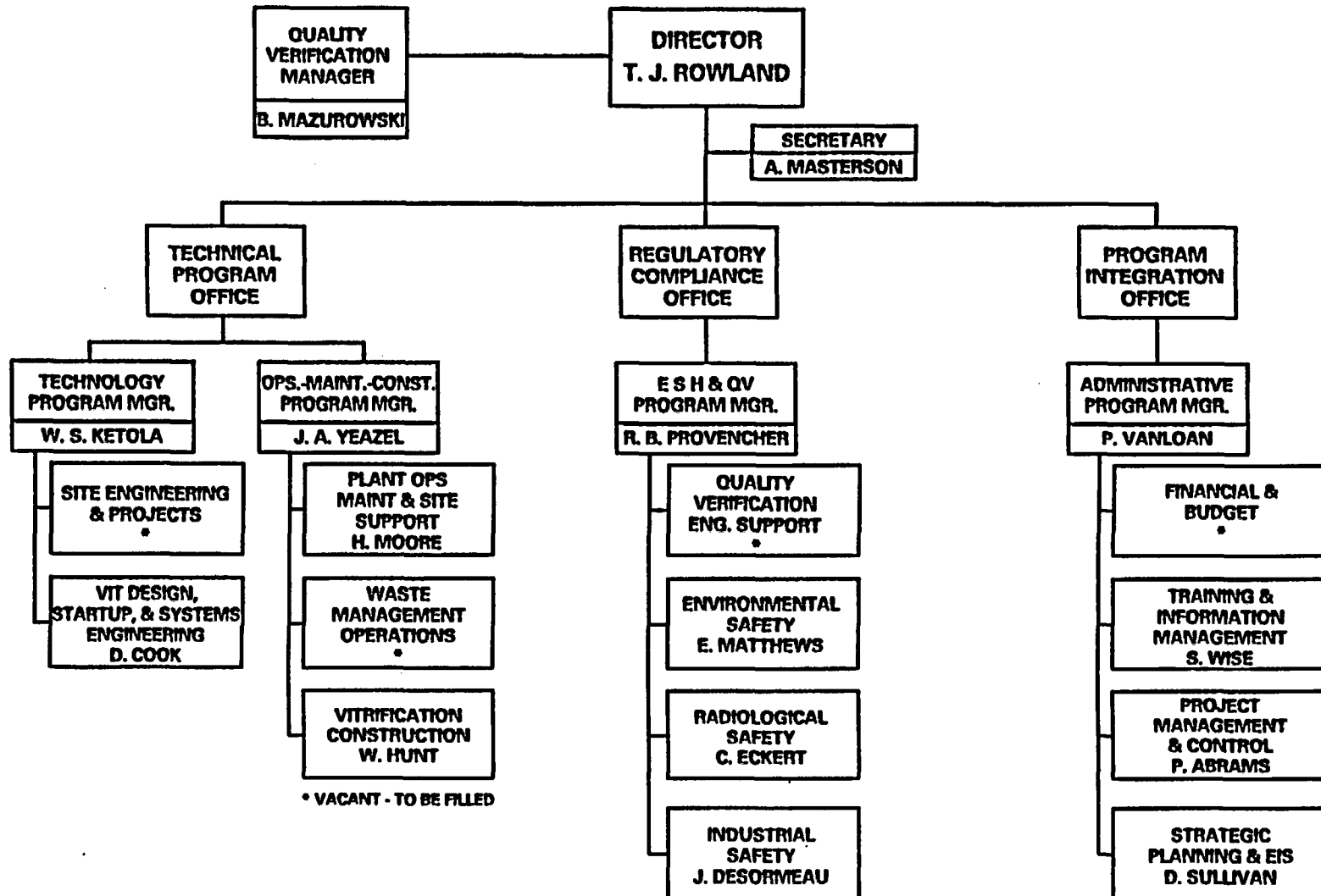
Auditor versus Observer

Auditor – One who comes upon the battlefield when the fighting is done and bayonets the helpless wounded.

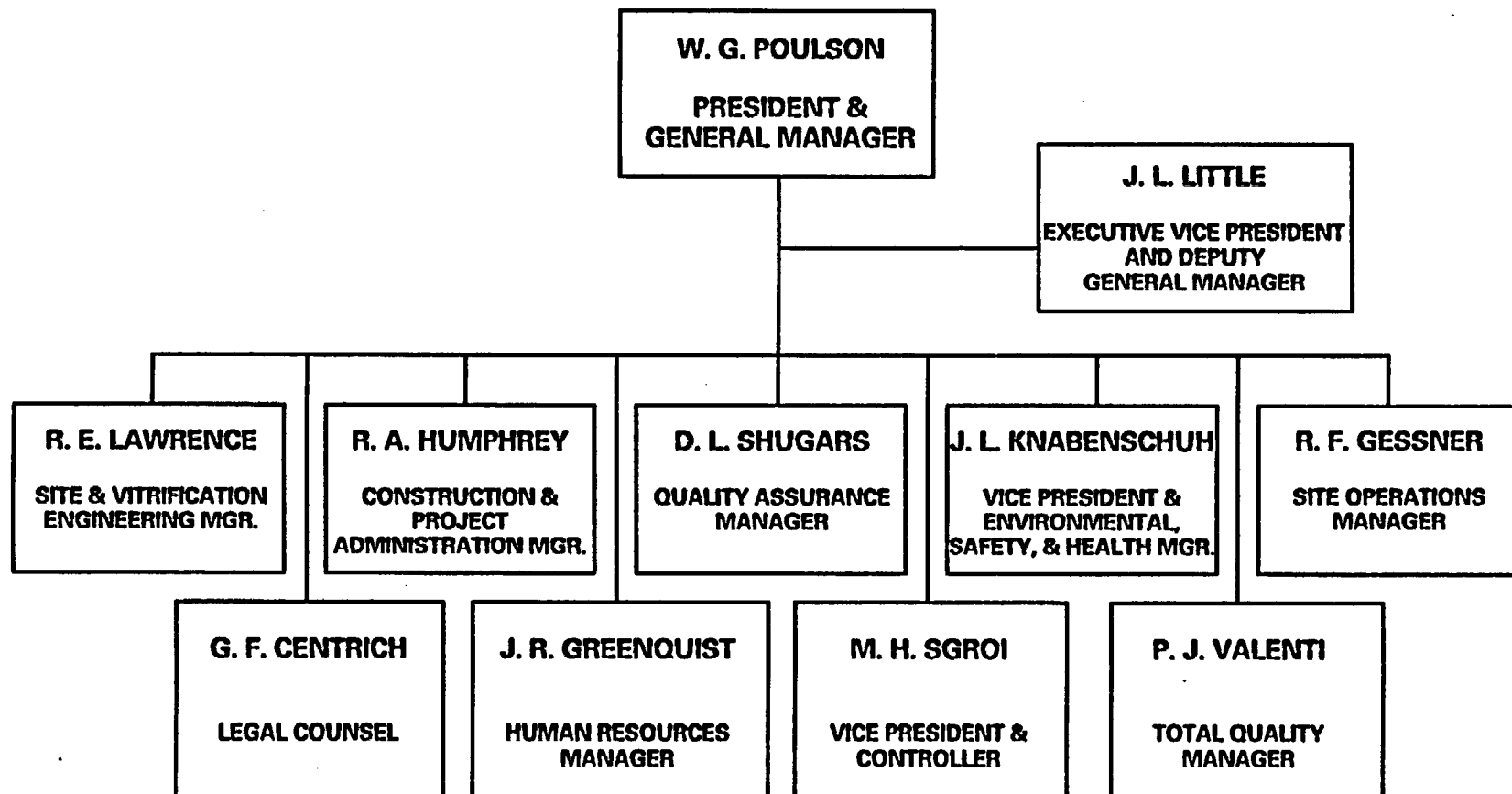
Observer – One who from a safe distance offers suggestions to improve on techniques of bayoneting.



WEST VALLEY PROJECT OFFICE



WEST VALLEY NUCLEAR SERVICES



FILE COPY

United States Government

Department of Energy

memorandum

DATE: AUG 12 1991

REPLY TO
ATTN OF EM-343

SUBJECT: Department of Energy-Headquarters/Vitrification Projects Branch Audit
(No. 91EA-WV-AU-001) of West Valley Project Office Quality Assurance Program

TO: T. J. Rowland, Director
West Valley Project Office

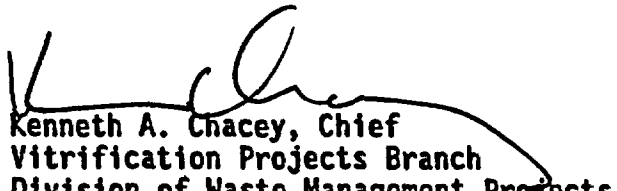
The attached audit report presents the results of the subject quality assurance program audit conducted at the West Valley Demonstration Project (WVDP) on June 17-21, 1991.

Major concerns were identified by the audit team resulting in the issuance of six Deficiency and Corrective Action Reports (DCAR's) and seven observations. The major concerns identified were in the areas of design control and portions of the West Valley Project Office (WVPO) training and qualification activities. An additional concern presented as an audit observation relates to a lack of responsiveness by the Department of Energy-Idaho Field Office (DOE-ID) in the review and approval of its Quality Assurance Program Description (QAPD).

The results of the audit and conclusions reached by the audit team indicate that WVPO needs to aggressively continue the implementation of its Quality Assurance Program. This includes increasing involvement by higher levels of management and applying training, where applicable, to promote a better understanding of the need to improve the application of the Quality Assurance Program to the mission of the WVDP.

It is, therefore, requested that WVPO reply to this report within 30 days from receipt of this memorandum. The reply is to be addressed to my office with a copy to Ken Chacey, EM-343, and shall identify: (1) the root cause of each identified deficiency, (2) the action(s) to be taken to correct the deficiency, (3) the action(s) to be taken to prevent recurrence of similar deficiencies, and (4) a schedule for completion of all involved actions. Please provide your responses on the DCAR forms included in the attached Audit Report.

Should you have any questions, please call Ken Chacey at Headquarters, FTS 233-7186, or W. J. Kehew at the Chicago Field Office at FTS 972-7818.


Kenneth A. Chacey, Chief
Vitrification Projects Branch
Division of Waste Management Projects
Environmental Restoration
and Waste Management

Attachment

cc: K. A. Chacey, EM-343
T. W. McIntosh, EM-343
L. Stevens, EM-331
R. S. Scott, EM-20
L. D. Vaughan, EM-20
J. E. Solecki, DOE-ID
D. Horton, RW-3
R. Clark, RW-3
W. J. Kehew, CH
M. H. Campbell, WHC
D. Clark, WHC
R. E. Stockman, BDM
J. C. Standifer, PDC

**U. S. DEPARTMENT OF ENERGY
ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
OFFICE OF WASTE OPERATIONS**

VITRIFICATION PROJECTS BRANCH (EM-343)

QUALITY ASSURANCE AUDIT

OF

**WEST VALLEY PROJECT OFFICE
QUALITY ASSURANCE PROGRAM IMPLEMENTATION
WEST VALLEY DEMONSTRATION PROJECT**

AUDIT NUMBER 91EA-WV-AU-001

AUDIT REPORT

WEST VALLEY, NEW YORK

JUNE 17-21, 1991

EXECUTIVE SUMMARY

**AUDIT NO. 91EA-WV-AU-001
OF WEST VALLEY PROJECT OFFICE
(WVPO) QUALITY ASSURANCE PROGRAM
BY THE VITRIFICATION PROJECTS BRANCH (EM-343)**

The DOE/Headquarters EM-343 audit team conducted a full scope audit of quality assurance program elements of the West Valley Demonstration Project on June 17 - 21, 1991 to determine the adequacy and effectiveness of the implemented portions of the West Valley Project Office (WVPO) Quality Assurance Program for High-Level Canistered Waste Form Production. The technical areas reviewed included:

- a) provisions for the on-site canister storage facility,
- b) design control, including control of modifications and as-builts,
- c) pre-operational test program for waste form processing, and
- d) canister procurement specifications.

The team did not review the waste form qualification process control and sampling as originally intended because this area is not sufficiently developed.

The audit team commends the WVPO for initiating a vigorous overview program of surveillances, as well as increasing the staffing level to accomplish its activities. The WVPO surveillances are performed by a number of the WVPO staff. The WVPO is encouraged to continue the performance of surveillances using a cross-section of WVPO staff to evaluate on-going quality-affecting activities being performed by WVPO and WVNS. Additionally, the WVPO has recently certified a Lead Auditor and has developed an audit schedule. WVPO is encouraged to pursue vigorous implementation of the audit program in the near term.

The two major concerns identified by the audit were in the areas of design control and portions of the WVPO training and qualification activities. The team noted that there were a number of deficiencies in the design area, that when considered in total, indicate a need for improvement in the design control processes. Concerns identified in the design area include:

- design criteria are not approved prior to developing and completing design,
- a lack of appropriate interface and alignment exists between WVPO and WVNS procedures for approval of design criteria,
- there is a lack of formal WVPO documentation of the design process,
- there are problems with application of the specification of design and quality levels, and
- inconsistencies in documentation exist between the Waste Form Compliance Plan and the Waste Form Qualification Report (WCP/WQR) requirements and implementing documents.

WVPO AUDIT NO. 91 EA-WV-AU-001

The second area of concern is qualification and training. The WVPO qualification and training program needs improvement to ensure:

- the requirements of DOE/RW-0214 for verification of education and experience, and for specification of position descriptions are met, and
- the effectiveness and timeliness of training on technical requirements prior to commencement of work activities.

The team was not able to provide an overall statement on the effectiveness of the WVPO quality assurance program implementing procedures due to their early development and implementation stage.

A total of 6 Deficiency and Corrective Action Reports (DCARs) and 7 Observations were issued as a result of this audit. The DCARs and Observations were identified in the following areas:

<u>QA PROGRAM ELEMENT</u>		<u>DCAR</u>	<u>OBSERVATION</u>
I.	Organization	-	2
II.	QA Program	1	1, 4
III.	Design Control	2, 3	6
IV.	Procurement	4	3
V.	Instructions, Procedures and Drawings	5	-
VI.	Document Control	6	-
IX.	Process Control	-	5
XIX.	Software QA	-	7

The audit team would like to express sincere appreciation for the assistance provided by the WVPO and WVNS. This assistance helped the audit process flow, and allowed the audit team to meet the completion deadline for this process. It was obvious to the audit team that WVPO and WVNS personnel displayed a very positive attitude and ownership of their QA program, and exhibited great pride in the performance of the project. When fully implemented and overviewed the WVPO QA Program should provide confidence in the accomplishment of the WVDP mission.

A description of audit activities and observations is presented in the following audit report. Specific details of audit findings are provided in DCARs, included as Attachment 4 to this report.

AUDIT REPORT

DOE/EM-343 QUALITY ASSURANCE AUDIT 91EA-WV-AU-001 OF DOE WEST VALLEY PROJECT OFFICE (WVPO) QUALITY ASSURANCE PROGRAM

**WEST VALLEY PROJECT OFFICE
WEST VALLEY, NEW YORK
JUNE 17-21, 1991**

I. AUDIT SCOPE

The audit included a review of the overall adequacy, implementation and effectiveness of the West Valley Project Office (WVPO) Quality Assurance Program for High-Level Canistered Waste Form Production.

1. PROGRAMMATIC REQUIREMENTS:

All Quality Assurance Program elements were reviewed as necessary to assess the applicability, implementation, and effectiveness. The elements included:

- (1) QUALITY ASSURANCE ORGANIZATION
- (2) QUALITY ASSURANCE PROGRAM
- (3) DESIGN CONTROL
- (4) PROCUREMENT DOCUMENT CONTROL
- (5) INSTRUCTIONS, PROCEDURES AND DRAWINGS
- (6) DOCUMENT CONTROL
- (7) CONTROL OF PURCHASED ITEMS AND SERVICES
- (8) IDENTIFICATION AND CONTROL OF ITEMS
- (9) CONTROL OF PROCESSES
- (10) INSPECTION
- (11) TEST CONTROL
- (12) CONTROL OF MEASURING AND TEST EQUIPMENT
- (13) HANDLING STORAGE AND SHIPPING
- (14) INSPECTION, TEST AND OPERATING STATUS
- (15) CONTROL OF NON-CONFORMING ITEMS
- (16) CORRECTIVE ACTION
- (17) QUALITY ASSURANCE RECORDS
- (18) AUDITS
- (19) SOFTWARE QUALITY ASSURANCE

2. TECHNICAL AREAS:

The audit team selected specific applicable quality assurance program elements of the WVPO QA Program to verify program implementation of design, procurement, fabrication, installation, testing, turnover, training, and personnel qualification, for the following areas/systems:

WVPO AUDIT NO. 91 EA-WV-AU-001

- (A) ON SITE CANISTER STORAGE PROVISIONS**
- (B) CONTROL OF MODIFICATIONS, AS-BUILTS, AND DESIGN CONTROL**
- (C) PRE-OPERATIONAL TEST PROGRAM FOR WASTE FORM PROCESSING**
- (D) CANISTER PROCUREMENT SPECIFICATION**

Waste Form qualification process control and sampling, as identified by the Audit Plan, was not evaluated due to insufficient development of the systems.

Site personnel were interviewed, and applicable records or files pertaining to the above systems and items necessary for verification, were reviewed by the audit team members.

3. PROGRAM DEFINING DOCUMENTS:

The Quality Assurance Program requirements and implementation documents listed below were used as the basis for audit preparation:

- (A) WVDP QUALITY ASSURANCE PROGRAM DESCRIPTION NO. WVDP-074, QAPD-2, DRAFT**
- (B) DOE ORDERS 5700.6B, "QUALITY ASSURANCE," 5820.2A, "RADIOACTIVE WASTE MANAGEMENT," AND 4700.1, "PROJECT MANAGEMENT SYSTEM"**
- (C) DOE/RW-0214, REV. 2, "QUALITY ASSURANCE REQUIREMENTS"**
- (D) AMERICAN SOCIETY FOR MECHANICAL ENGINEERS, NQA-1, 1986 EDITION, WITH SUPPLEMENTS**
- (E) WVDP QUALITY ASSURANCE PROGRAM IMPLEMENTING PROCEDURES**

II. AUDIT PARTICIPANTS

A. Audit Coordinator: Kenneth A. Chacey, Chief, Vitrification Projects Branch, EM-343

B. Audit Team:

W. J. Kehew, DOE/CH	Team Leader
J. E. Hennessey, DOE/EM	Assistant Team Leader
I. J. Lefman, SAIC	Sub-team Leader
J. A. Flaherty, SAIC	Team Member
V. G. Trice, DOE/EM	Team Member
S. L. Crawford, SAIC	Sub-team Leader
C. J. Payton, PDC	Team Member
M. E. Peterson, PNL	Team Member
R. E. Stockman, BDM	Sub-team Leader
M. H. Campbell, WHC	Team Member
D. E. Ryder, PNL	Team Member

WVPO AUDIT NO. 91 EA-WV-AU-001

C. Observers:

**C. D. Morell, CER, (RW-3)
L. D. Vaughan, DOE/EM-20
J. T. Conway, USNRC
S. G. Harblson, NYSERDA (State of New York)
R. W. Clark, DOE/RW-3**

D. Personnel Contacted:

A listing of the persons who attended the Pre-Audit Conference and the Post-Audit Conference is provided in Attachment 1 to this report. Also identified in the listing are personnel contacted during the audit.

III. PRE-AUDIT CONFERENCE

The audit team held the pre-audit conference on June 17, 1991 at 1:00 pm. Mr. Tom Rowland, WVPO Director, presented the opening remarks and reviewed the DOE and Operating Contractor's Organizational structures. Mr. R. B. Provencher, WVPO/ESH&QV Program Manager, presented the WVPO overview and status of the Quality Assurance Program for DOE. Mr. D. L. Shugars, West Valley Nuclear Services (WVNS) Quality Assurance Manager presented the WVNS Quality Assurance Program status, as well as a review of the West Valley Demonstration Project (WVDP) facility status. Mr. W. J. Kehew, Audit Team Leader, reviewed the audit scope, objectives, approach, schedule, conduct and interfaces. Remarks were invited from the NRC, RW, and the State of New York. Identification of escorts and audit contacts were arranged and the meeting came to a close at 2:45 pm.

A brief tour of the WVDP facilities was conducted by site representatives for the benefit of interested audit team personnel and observers prior to the start of the audit.

IV. POST-AUDIT CONFERENCE

The audit team held a post-audit conference on June 21, 1991, at 10:00 am. Mr. Kehew, the Audit Team Leader, presented a summary of the audit team's findings and observations to the Management of the West Valley Project Office. Copies of the draft Deviation and Corrective Action Reports (DCARs) were presented to the DOE Director of the WVPO. Personnel were instructed that the DCARs were for information only and that any direction for corrective action would come from Mr. S. P. Cowan, Deputy Director, Office of Waste Operations, Environmental Restoration and Waste Management, in the form of the final audit report, to be issued by July 21, 1991.

WVPO AUDIT NO. 91 EA-WV-AU-001

V. DEVIATIONS AND OBSERVATIONS

DEVIATIONS:

Six DCARs (Deviation and Corrective Action Reports) were issued as a result of this audit, identifying the following deficiencies:

1. Inadequate implementation of personnel qualification, indoctrination and training requirements. (DCAR 91EA-WV-AU-001-01)
2. Quality levels assigned to the vitrification systems were based only on safety factors. (DCAR 91EA-WV-AU-001-02)
3. Review and approval of design criteria, design reviews, and the design process in general by WVPO is not clearly defined. Design inputs have not been completed and approved in a timely manner. Design changes have not been adequately incorporated. (DCAR 91EA-WV-AU-001-03)
4. Quality level C equipment is being purchased as quality level N. (DCAR 91EA-WV-AU-001-04)
5. WVPO-AR-601, Rev. 0, dated 5/29/89 does not provide adequate guidance on how to document reviews. (DCAR 91EA-WV-AU-001-05)
6. Document control practices are not uniformly implemented. (DCAR 91EA-WV-AU-001-06)

Details of these deficiencies are included in the DCARs, Attachment 4 to this Audit Report.

OBSERVATIONS

1. The WVPO Quality Assurance Program Description (QAPD) had not been approved for implementation and use. Consolidated Quality Assurance Review Group (QARG) comment responses were discussed with WVPO and WVNS representatives on January 23, 1991 and agreement was reached. A draft WVDP-074 containing these responses was submitted to the DOE Idaho Field Office (DOE/ID) for approval on February 22, 1991. WVPO was advised that QA program status would be evaluated in conjunction with the EM-343 audit and was provided with notification of this intent via an audit plan on May 14, 1991. At the beginning of this audit on June 17, 1991, the QAPD was still not approved. A response to this observation is required.

WVPO AUDIT NO. 91 EA-WV-AU-001

2. As a result of an EM-343 review group's comments on the WVPO (Project Office) QA Program Description, the Project Office established the Quality Verification Manager (QVM) position reporting directly to the Project Office Director. Until the Project Office can obtain approval to fill this position with a DOE employee, this position is being filled by an employee of a support services contractor that has a contractual agreement with the Operating Contractor (OC). This condition presents a perceived conflict of interest, a concern expressed by both DOE-RW and the U.S. Nuclear Regulatory Commission observers of this audit.

The audit team evaluated this perception and could not detect any evidence of an actual conflict of interest or bias in objectivity involving the current individual assigned to the QVM position. As an example, the acting Quality Verification Manager has performed or supervised the performance of 58 surveillances of the Operating Contractor since September 20, 1990. These surveillances have required a significant amount of corrective action to be performed by the Operating Contractor. It is the opinion of the audit team that the current assignment may be continued until the Quality Verification Manager position can be filled by a DOE employee. A response to this observation is required.

3. NQA-1, Supplement 4S-1, requires procurement documents to include applicable technical and quality program requirements and provisions for reporting and approving disposition of nonconformances. There are two areas of concern. First, WVPO has not identified the requirements for reviewing and approving disposition of WVNS nonconformances. Secondly, WVPO has not identified the specific software QA requirements of DOE/RW-0214 for PNL software activities. A response to this observation is required.
4. Although authority and responsibility for work stoppage and re-start is described for the West Valley Project Office in WVPO-QP-639, Revision 3, 6/14/91, "WVPO Quality Functions and Responsibilities, Stop Work and Quality Concerns", there is no indication that DOE/ID is to be notified when stop work occurs or has been requested at the WVDP. Also, the DOE/ID interface and authority for stopping work at the WVDP is not addressed. The WVPO should consider revising this procedure to address these activities. A response to this observation is required.
5. NQA-1, Supplement 2S-2 requires records of NDE personnel to be maintained and that NDE personnel are to be qualified in accordance with SNT-TC-1A. NDE Level III certification for the subcontracted NDE Level III Examiner (Robert E. Cameron, Hellier Associates Inc.) in PT, RT, MT, UT, and ET expired on 10/6/90. New or extended certifications have not been obtained from Hellier Associates. A response to this observation is required.

NOTE: WVNS QAP 9-2 does not identify any responsibilities or qualification and certification requirements for NDE Level III examiners.

WVPO AUDIT NO. 91 EA-WV-AU-001

6. HLW glass canister material, identification, dimension, fabrication, and examination requirements are established by the Waste Acceptance Preliminary Specification (WAPS), Waste Form Compliance Plan (WCP), Waste Form Qualification Report (WQR), fabrication, specification, and canister drawings.

A number of minor discrepancies and inconsistent data were noted among the above documents, which, taken together, indicate that more thorough technical reviews of the documents should be performed prior to release of the documents. Examples are included as Attachment 2 to this report. A response to this observation is required.

7. DOE/RW-0214 requires that validation and verification of software be performed by personnel other than those who developed the code. However, engineering procedure EP-3-017 allows the "testing" to be performed by code developers. Since the functional sub-parts of the procedure's definition of "testing" include validation and verification, there is a potential that testing (including verification and validation) may not be performed by an independent person. Upon investigation, it was determined that the required independent software verification and validation is being correctly executed. However, the definition of testing should be clarified. A response to this observation is required.

VI. AUDIT OBSERVER INQUIRIES:

During the audit, observer questions from RW were presented to the Audit Team Leader as inquiries. These concerns were subsequently evaluated and satisfactorily responded to by the audit team. The specifics of these observer inquiries are summarized in Attachment 3 to this report.

WVPO AUDIT NO. 91EA-WV-AU-001

VII. AUDIT TEAM MEMBERS CONCURRENCE:

W. J. Kehew
W. J. Kehew, Audit Team Leader

7/31/91
Date

J. E. Hennessey
J. E. Hennessey, Assistant Team Leader

7/29/91
Date

I. J. Leiman
I. J. Leiman, Sub-team Leader

07/25/91
Date

J. A. Flaherty
J. A. Flaherty, Team Member

7/31/91
Date

V. G. Trice
V. G. Trice, Team Member

7/31/91
Date

S. L. Crawford
S. L. Crawford, Sub-team Leader

7/29/91
Date

C. J. Payton
C. J. Payton, Team Member

7/29/91
Date

M. E. Peterson
M. E. Peterson, Team Member

7/25/91
Date

R. E. Stockman
R. E. Stockman, Sub-team Leader

7/25/91
Date

M. H. Campbell
M. H. Campbell, Team Member

7/25/91
Date

D. E. Ryder
D. E. Ryder, Team Member

7/25/91
Date

WVPO AUDIT NO. 91 EA-WV-AU-001

ATTACHMENT I

LIST OF AUDIT MEETING ATTENDEES AND CONTACTS

A = ATTENDED PRE-AUDIT CONFERENCE
B = ATTENDED POST-AUDIT CONFERENCE
C = CONTACTED DURING AUDIT

<u>NAME</u>	<u>ORGANIZATION</u>	<u>A</u>	<u>B</u>	<u>C</u>
P. Abrams	DOE/WVPO		X	
G. G. Baker	WVNS		X	
S. M. Barnes	WVNS			X
D. J. Beasley	DOE/WVPO		X	X
D. L. Bonenberger	WVNS		X	X
J. J. Buggy	WVNS	X	X	
D. C. Burns	WVNS		X	X
R. A. Carter	EJR (WVPO)	X	X	X
R. W. Clark	DOE/RW-3		X	
J. T. Conway	USNRC	X	X	
S. L. Crawford	SAIC (EM-343)	X	X	
M. K. Cwyner	WVNS			X
D. L. Dempster	WVNS			X
J. Dempster	WVNS			X
J. E. Flaherty	SAIC (EM-343)	X	X	
J. R. Greenquist	WVNS		X	
S. G. Harbison	NYSERDA	X	X	
J. E. Hennessey	DOE/EM-343	X	X	
L. L. Howard	WVNS			X
J. P. Hummel	WVNS	X	X	X
W. Hunt	DOE/WVPO		X	
S. A. Jalowiec	WVNS			X
E. D. Karaffa	WVNS			X
P. L. Keel	WVNS			X
W. J. Kehew	DOE/CH (EM-343)	X	X	
W. S. Ketola	DOE(WVPO)		X	X
P. S. Klanian	WVNS			X
J. L. Knabenschuh	WVNS		X	
R. E. Lawrence	WVNS		X	
I. J. Lefman	SAIC (EM-343)	X	X	
A. L. Lengyel	DOE(WVPO)		X	
B. E. Lindbergh	WVNS			X

ATTACHMENT 1 (CONTINUED)
LIST OF AUDIT MEETING ATTENDEES AND CONTACTS

A = ATTENDED PRE-AUDIT CONFERENCE
B = ATTENDED POST-AUDIT CONFERENCE
C = CONTACTED DURING AUDIT

<u>NAME</u>	<u>ORGANIZATION</u>	<u>A</u>	<u>B</u>	<u>C</u>
S. A. Logan	WVNS			X
T. W. McIntosh	DOE/EM-343		X	
R. A. Meigs	WVNS			X
D. E. Merrill	UE & C(WVPO)		X	X
S. W. Metzger	DOE/WVPO	X	X	X
C. D. Morell	CER(RW-3)	X	X	
P. C. Newsom	WVNS			X
J. Paul	WVNS			X
C. J. Payton	PDC(EM-343)	X	X	
M. E. Peterson	PNL(EM-343)	X	X	
W. G. Poulson	WVNS		X	
R. B. Provencher	DOE/WVPO	X	X	X
J. Reynolds	WVNS			X
E. J. Riley	EJR(WVPO)	X		X
C. J. Roberts	WVNS			X
T. Rowland	DOE/WVPO	X	X	X
D. E. Ryder	PNL(EM-343)	X	X	
C. M. Schiffhauer	WVNS		X	X
M. H. Sgroi	WVNS			X
D. L. Shugars	WVNS	X	X	X
D. L. Smithmeyer	WVNS			X
P. A. Szalinski	WVNS			X
S. J. Szalinski	WVNS			X
R. E. Stockman	BDM(EM-343)	X	X	
D. W. Sullivan	DOE/WVPO		X	X
V. G. Trice	DOE(EM-343)	X	X	
P. Van Loan	DOE/WVPO			X
R. F. Vance	WVNS			X
L. D. Vaughan	DOE/EM-20.		X	
J. A. Yeazel	DOE/WVPO		X	X

WVPO AUDIT NO. 91 EA-WV-AU-001

ATTACHMENT 2

EXAMPLES OF CANISTER DOCUMENT DISCREPANCIES
(Reference Observation No. 6)

REFERENCES:

1. Waste Acceptance Preliminary Specification (WAPS), DOE/RW-0261, 1/90
2. Waste Form Compliance Plan (WCP), WVNS-WCP-001, Rev. 2, 6/13/90
3. Waste Form Qualification Report (WQR), WVNS-WQR-001, Draft
4. Drawing - 900E-1092, Rev. 2, 3/11/88
- 900D-1092, Rev. 3, 4/26/90
5. Fabrication Specification, WVNS-FA-114, Rev. 3, 4/17/90

CONCERN:

The following 18 discrepancies were noted in comparisons of the above referenced documents.

A. Waste Compliance Plan (including Drawing 900E-1092)

1. Drawing 900E-1092, Rev. 2, (WCP, page 58) does not show canister serial number (SN) location or specified type face and dimensions. The SN is a weld overlay and is to be liquid penetrant (PT) examined. All welds and NDE should be shown; the SN is a physical part of the canister.
2. Drawing 900E-1092, Rev. 2 (WCP, page 58) does not identify the specific NDE callouts required by the fabrication specification. It is a standard drawing practice to identify NDE requirements with the weld identification.
3. The 5% canister sampling inspecting (WCP, page 59) is not a "recognized standard practice" per NQA-1, Supplement 10S-1, para. 4.2, and is not a statistically valid sampling plan.
4. The weld descriptions (WCP, page 60) are not consistent for the closure weld. An EMAD welding machine is described as both GTAW and as GMAW for the RH-TRU container closure weld.
5. Canister identification numbers (S/N) are "Modified Block" (WPC, page 64, 65) versus "Megaron Bold Condensed" provided by the WAPS; a specific letter/number size should be identified, rather than a range, 1.3" (3.25 cm, 92 points) to 2.0" (5.1 cm, 144 points). 92 points is specified by the WAPS as the minimum size; 144 points is the WCP maximum.
6. The actual weight, length, diameter and minimum wall thickness (MWT) are not identified in the WCP (page 97) as required by WAPS, specification 3.11. (The WCP indicates the data will be provided in the WQR, when issued.)

ATTACHMENT 2 (continued)

EXAMPLES OF CANISTER DOCUMENT DISCREPANCIES
(Reference Observation No. 6)

7. The WCP (page 103) indicates the planned flange geometry "is shown in figure 2." Figure 2 is drawing 900E-1092, Rev. 2. The current planned flange geometry is shown on drawing 900D-1092, Rev. 3 and is of a different configuration.
8. The WCP (page 103) requires a lifting flange load test at 150% of the 100% full canister mass (weight). The maximum canister weight per WAPS, specification 3.11.1 is 3,000 kg (6600 lbs.); the appropriate load test would then be 9900 lbs. The fabrication specification requires a grappling flange tensile test at 8000 lbs. for 10 minutes. The 8000 lbs. proof test (at 150%) represents a maximum 100% filled canister weight of 5333 lbs.

B. Waste Qualification Report

1. WQR Sections 2.1 and 2.3 (transmitted to TRG, 4/17/90) reference an obsolete version of the Waste Acceptance Preliminary Specification (WAPS), DOE/RW-0136, OGR/B-9, 4/87. DOE/RW-0261, PE-04, 1/90 is the current WAPS.

C. Fabrication Specification (Fab Spec)

1. The Fab Spec para. 2.1, 3.0 and 6.7, identify the applicable drawing as 900E-1092 (Rev. 2). The current drawing has been reduced to a size D drawing, 900D-1092, Rev. 3.
2. The Fab Spec para. 4.2, provides for alternate cylinder material to be A269 pipe and square bar to be A479. The WCP identifies A479 as pipe and A269 as square bar. Drawing 900D-1092, Rev. 3 provides for the revised grappling flange and nozzle to be machined from A312 (18" sch 80) pipe. A312 is not identified in the Fab Spec.
3. The Fab Spec para. 4.3, provides for weld filler material to be SFA 5.4 (E308L) or SFA 5.9 (ER308L) weld filler material. The WCP does not identify SFA 5.4 as an alternate material; the alloy designation in the Fab Spec for SFA 5.4 appears to be incorrect.

ATTACHMENT 2 (continued)

**EXAMPLES OF CANISTER DOCUMENT DISCREPANCIES
(Reference Observation No. 6)**

4. The Fab Spec para. 5.3, provides for canister identification numbers (S/N) to be 1.3" to 2.0". A specific letter/number size should be specified. See comment A.5 above.
5. The Fab Spec para 6.5.1, provides for head to shell welds (circumferential) to be 100% radiographed; cylinder welds (longitudinal) are to be examined by "spot radiography" per ASME B&PV Code, Section VIII, Division 1, Article UW-52 (UW-51 is referenced by the Fab Spec). UW-52, "NOTE", indicates that spot radiography is an in-process examination of a portion of weld, prior to completion of the entire weld. The note further states "spot radiography in accordance with these rules will not ensure a fabrication product of predetermined quality level throughout.....If all radiographically disclosed weld defects must be eliminated from a vessel, then 100% radiography must be employed." Furthermore, UW-52 provides for a single spot radiograph to represent 50' of linear weld. This allows up to 5 canister longitudinal weld seams to be represented by a single radiograph. 100% radiography is considered appropriate for all canister full penetration (butt) welds. Therefore, the Fab Spec should reflect this.
6. The Fab Spec para. 6.6, requires a Helium Leak Test (HLT) of the fabricated canisters per ANSI N14.5, but does not require the NDE operators to be certified to SNT-TC-1A, Level II. (RT and PT examiners are required by the Fab Spec. to be certified to SNT-TC-1A, Level II.) HLT Examiner & Certification records should also be listed in para. 10.0.
7. The Fab Spec para. 9.0 identifies the applicability of NQA-1, 1986, but does not identify or reference the provisions of QARD, DOE/RW-0214.
8. The Fab Spec does not include an alphabet/number chart or template for the "modified block" type face required by the WCP.

D. Drawing 900D-1092, Rev. 3

1. The current drawing (4/26/90) reflects a different canister configuration than the WCP or fabricated prototypes. In particular, the current design includes a machined unitized grapppling flange/nozzle instead of a welded sub assembly. The canister shell also allows the option of splicing two shell courses to make the entire cylinder length. This adds an additional circumferential full penetration weld to the canister.

WVPO AUDIT NO. 91 EA-WV-AU-001

**ATTACHMENT 3
AUDIT OBSERVER INQUIRIES
(Reference Audit Report, Section VI)**

REQUIREMENT REFERENCE:

DOE-RW-0261, Waste Acceptance Preliminary Specifications for the West Valley Demonstration Project High Level Waste Form, January 1, 1990.

QUESTION/CONCERN:

1. The presentation handout states (reference; PP-DL 8-457-4, Titled, HLW QA PROGRAM MILESTONES): The WAPS for West Valley (OGR-B9) was issued 1987. Question: Which revision and dates of issue?

RESPONSE:

The WCP (WVNS-WCP-001, Rev. 2, 6/13/90), page 5, references the WAPS for WVDP HLWF (OCRWM, 1990). Furthermore, "REFERENCES", page 115, identifies OCRWM 1990 as "WAPS for WVDP HLWF, Rev. 1, PE-04 (formerly OGR/B-9), DOE/RW-0261, U. S. Department of Energy, Washington, DC." Also, design criteria WVNS-DC-022, Rev. 2, 6/4/91, Paragraph 4.1.1.1.c references the WAPS as Rev. 1, dated January, 1990.

QUESTION/CONCERN:

2. The presentation handout states (reference; PP-DL 8-457-4, Titled, HLW QA PROGRAM MILESTONES): The WCPs for West Valley was issued April 1989. Question: Which revision and date of issue [of] the WAPS was used to baseline the WCP? Also, was the WAPS used a OCRWM controlled issue document? If so, please provide objective evidence of how it was issued and who it was issued to.

RESPONSE:

The WCP has been released for external review as Rev. 2, June, 1990, and references WAPS, Rev. 1, as noted above. RW-0261/PE-04, Rev. 1, is not issued by DOE/RW as a controlled document.

QUESTION/CONCERN:

3. The presentation handout states (reference; PP-DL 8-457-4, Titled, HLW QA PROGRAM MILESTONES): The WCP for West Valley was Issued April 1989. Question: Who concurred the WCP? According to the WAPS, Revision 1, the concurrence of the WCP is the responsibility of "the repository project and the agreement of the WAC Chairman." Please provide objective evidence of these actions.

RESPONSE:

The current WCP is Rev. 2, 6/13/90. The WCP has been reviewed by the DOE/EM Technical Review Group (TRG); TRG comments were resolved with WVPO on 10/30/90. TRG letter, VP/TRG-0058, 1/3/91, indicated that the WCP was to be issued with the comments incorporated by WVPO to the TRG for final review and concurrence, prior to forwarding the WCP to EM-343 for further transmittal to DOE/RW. Subsequently, WVPO letter

WVPO AUDIT NO. 91 EA-WV-AU-001

**ATTACHMENT 3 (continued)
AUDIT OBSERVER INQUIRIES
(Reference Audit Report, Section VI)**

WSK:017:91 0054:91:03, 6/12/91 indicated that revision of the WCP would be delayed to 8/31/91 pending approval and issue of the WAPS as Rev. 2. Information available to the audit team states the WAC Chairman responsibility was passed to M. Cloninger, DOE/YMPO. The audit team notes that the current draft WAPS, Rev. 2, 1/91, does not identify a WAC Chairman

WVPO AUDIT NO. 91 EA-WV-AU-001

ATTACHMENT 4

DEVIATION AND CORRECTIVE ACTION REPORTS (DCAR)

THIS ATTACHMENT CONTAINS THE FOLLOWING DEVIATION AND CORRECTIVE ACTION REPORTS (DCARs):

- 1. 91EA-WV-AU-001-01**
- 2. 91EA-WV-AU-001-02**
- 3. 91EA-WV-AU-001-03**
- 4. 91EA-WV-AU-001-04**
- 5. 91EA-WV-AU-001-05**
- 6. 91EA-WV-AU-001-06**

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91EA--WV-AU-001-01

Rev. Number: _____

1 Evaluating Organization

Date of Discovery: 06/20/91 Responsible Organization: DOE-WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: QA Program (training and qualification) Location: WVDP

2 Evaluating Organization

Requirement(s): DOE/RW-0214, Rev. 2, 2.6.2 and ASME NQA-1, Supplement 2S-4

Deviation:

Inadequate implementation of personnel qualification, indoctrination and training requirements.

(SEE CONTINUATION, PAGE 3)

Provide Response by: Within 30 days from receipt of audit report.

(Date)

Current Status:

Evaluator D. E. Ryder, I. J. Lefman

Date 06/20/91

Evaluating Organization

Proposed Disposition: n/a see page 2

Scheduled Completion Date: _____

Responsible Organization Representative: _____ Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____ Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____ Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-01

Rev. Number: _____

7

Request for Corrective Action:

DOE/WVPO is requested to correct the deviation(s) described on page 1 and to provide a response to all of the items requested in Section 8 of this DCAR.

Evaluator *J. Ryder* Ryder, Lefman Date 06/20/91

Concurrence By: *W.G. Kehew* W.G. Kehew Date 07/16/91

J.W. Mustard
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to Investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

DCAR NUMBER: 91 EA-WV-AU-001-01

Date of Discovery: 06/20/91

Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. Rowland

Activity: QA Program (training and qualification)

Location: WVDP

CONTINUATION, PAGE 3

WVPO staff typically have received a significant amount of classroom training on topics that include but are not necessarily limited to:

1. NQA-1 and DOE/RW-0214
2. Performance of Surveillances
3. Conduct of Operations
4. Hazardous Waste Training
5. DOE Order 5000.3A

A West Valley Demonstration Project Training Plan (WVPO-TR-101, Rev. 0) was issued on May 7, 1991. In compliance with the Training Plan, each WVPO staff member was issued a short range training plan (required courses) and an Employee Indoctrination and Training Checklist (required reading or familiarization) during June, 1991. The issue of the checklist is the first evidence that WVPO staff have been required to receive training on the applicable WVPO implementing procedures.

Short Range Training Plans (SRTPs) were issued for the January to June 1991 time period, but were not approved until June, 1991. It may have been more appropriate if the SRTPs had been issued for the July to December 1991 time period.

Some WVPO personnel interviewed were not familiar with procedure requirements of WVPO and WVNS for activities for which they have oversight responsibility.

The Training Checklist gives WVPO staff sixty (60) working days to complete the assignment. Training associated with the performance of quality-affecting activities (e.g., Technical Reviews) should be completed as soon as possible, and before performing the activity.

Minimum education and experience requirements for DOE positions are identified in Job Announcements prepared during the employee requisition phase by DOE-ID. Applicant education and experience are verified by DOE-ID personnel staff prior to making them available for interview by the hiring manager. However, there is no documented evidence available at the WVPO that this verification process has taken place for WVPO staff performing activities that affect quality.

Position descriptions identifying activities affecting quality were available for WVPO staff. However, these position descriptions do not identify minimum education and experience prerequisites for each position involved in the performance or verification of activities affecting quality, as required by DOE/RW-0214.

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91EA-WV-AU-001-02

Rev. Number: _____

1 Evaluating Organization

Date of Discovery: 06/20/91 Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: Design Control (quality levels) Location: WVDP

2 Evaluating Organization

Requirement(s): WVNS QM-2 specifies the factors (complexity, uncertainty in operational and performance characteristics, environmental, safety, health and programmatic impacts, etc.) which should be considered in assigning a quality level.

Deviation:

The quality levels assigned to the vitrification systems were based only on safety levels. For example: the canister decontamination station, fire detection and protection, process instrumentation and controls were assigned level N; process radiation monitors, area radiation monitors, airborne particulate monitors, liquid HLW sampling and off-gas system are assigned a level C. It appears that some systems and components have been assigned a lower quality level because only safety factors were considered. In addition, it did not appear that specific quality assurance requirements had been assigned for each level.

Provide Response by: Within 30 days from receipt of audit report.

(Date)

Current Status:

Evaluator M. Peterson, S. Crawford  Date 06/20/91

Evaluating Organization

Proposed Disposition:

n/a see page 2

Scheduled Completion Date: _____

Responsible Organization Representative: _____ Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____ Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____ Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)
Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-02

Rev. Number: _____

7

Request for Corrective Action:

DOE/WVPO is requested to correct the deviation(s) described on page 1 and to provide a response to all of the items requested in Section 8 of this DCAR.

Evaluator *Peterson, Crawford* Date 06/20/91

Concurrence By: *W.D. Kehew* Date 07/16/91

John Mc Intosh
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to Investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91EA-WV-AU-001-03

Rev. Number: _____

1 Evaluating Organization

Date of Discovery: 06/18 & 19/91 Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: Design Control Location: WVDP

2 Evaluating Organization

Requirement(s): (A) ASME NQA-1, Supplement 1S-1, DOE/RW-0214, QAR Rev. 2, 1.2

(B) QM 3, Rev. 5, Para. 3.2

(C) ASME NQA-1, Basic Requirement 3

Deviation:

(A) Review and approval of design criteria, design reviews, and the design process in general by WVPO is not clearly defined. WVNS engineering procedures require DOE approval of design procedures and design reviews. However, WVPO does not agree that they need to approve design criteria. Also, there is no formal documentation of periodic meetings held between WVNS and WVPO to discuss design.

(B) Design inputs have not been completed and approved on a timely basis. Design criteria WVNS-DC-046, Rev. 0, Draft J, dated 3/89 has not been approved by WVNS or WVPO. The design is 95% complete and construction has commenced.

(C) Design changes have not been adequately incorporated. Example: WVNS-DC-046 Draft J does not correctly incorporate EBAR 1253 changes to Draft I.

Provide Response by: Within 30 days from receipt of audit report.

(Date)

Current Status: 

Evaluator I. J. Leiman, J. E. Flaherty

Date 06/18 & 19/91

Evaluating Organization

Proposed Disposition:

Scheduled Completion Date: _____

Responsible Organization Representative: _____ Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____ Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____ Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)
Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-03

Rev. Number: 0

7

Request for Corrective Action:

DOE/WVPO is requested to correct the deviation described on page 1 and to provide a response to all of the items requested in Section 8 of this DCAR.

Evaluator *[Signature]*
Leifman, Piherty

Date 06/18 & 19/91

Concurrence By: *[Signature]*
W.D. Kenew

Date 07/16/91

[Signature]
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to Investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91EA-WV-AU-001-04

Rev. Number: _____

1 Evaluating Organization

Date of Discovery: 06/20/91

Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: Procurement

Location: WVDP

2 Evaluating Organization

Requirement(s): WVNS QM 4-1 provides for application of quality level N procurement of "systems, subsystems, structures, and components which do not have significant importance to environmental health and safety, service or programmatic project activities. They do not require specified quality requirements or WVNS Quality Assurance Department review and approval."

Deviation:

Quality level C equipment is being purchased as quality level N. As a result, no QA review is required to assure procurement and receipt inspection criteria are identified and appropriate to the purchased items. Example:

P. O. #19-51035-N-EK, Eberline Corporation
Alpha Continuous Air Monitors, Model 5AS
Beta-Gamma Air Monitors, Model AMS-3A

Provide Response by: Within 30 days from receipt of audit report
(Date)

Current Status:

Evaluator S. L. Crawford

Date 06/20/91

Evaluating Organization

Proposed Disposition:

n/a see page 2

Scheduled Completion Date: _____

Responsible Organization Representative: _____

Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____

Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____

Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____

Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-04

Rev. Number: _____

7

Request for Corrective Action:

DOE/WVPO is requested to correct the deviation(s) described on page 1 and to provide a response to all of the the items requested in Section 8 of this DCAR.

Evaluator *S. L. Crawford* Date 06/20/91

Concurrence By: *W. J. Kehew* Date 07/16/91

Tom McLeod
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to Investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91 EA-WV-AU-001-05

Rev. Number: 0

1 Evaluating Organization

Date of Discovery: 06/20/91 Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: Instructions, Procedures and Drawings Location: WVDP

2 Evaluating Organization

Requirement(s): ASME NQA-1, Criterion 5, Basic Requirement, states, in part: "Activities affecting quality shall be performed in accordance with documented procedures."

Deviation:

WVPO-AR-601, Rev. 0, dated 5/29/89 does not provide adequate guidance on how to document reviews using guide sheets. WVPO personnel stated that they document reviews on separate sheets of paper, trip reports or other techniques. The procedure does not provide adequate qualitative and quantitative criteria for conducting reviews.

Provide Response by: Within 30 days from receipt of audit report.
(Date)

Current Status:

Evaluator J. El Hennessey

Date 06/20/91

Evaluating Organization

Proposed Disposition: n/a see page 2

Scheduled Completion Date: _____

Responsible Organization Representative: _____ Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____ Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____ Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)
Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-05

Rev. Number: _____

7

Request for Corrective Action:

DOE/WVPO is requested to correct the deviation(s) described on page 1 and to provide a response to all of the items requested in Section 8 of this DCAR.

Evaluator J. E. Hennessey *JEH* Date 06/20/91

Concurrence By: W. J. Kehew *WJ Kehew* Date 07/16/91

John McClinton
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 1 - Deviation Report

DCAR Number: 91 EA-WV-AU-C71-06

Rev. Number: 0

1 Evaluating Organization

Date of Discovery: 06/20/91

Responsible Organization: DOE/WVPO

Responsible Organization Representative: T. J. ROWLAND

Activity: Document Control

Location: WVDP

2 Evaluating Organization

Requirement(s): WVPO-QP-642, Rev. 3, para. 6.6; EP-6-001, Rev. 1.

Deviation:

Document control requirements are not uniformly implemented. EP-6-001, Rev. 1, paragraph 5.1.5 states, in part: "Any additional copies made from controlled distribution documents are to be identified as 'uncontrolled' prior to distribution. Any superseded document should be destroyed by the recipient." The audit team noted that some copies of controlled documents provided to the team were not stamped or identified as "uncontrolled." Several drawings that were located in the cognizant engineer's file were superseded by later revisions or ECNs, but the drawings were not identified as such. Additionally, the document control requirements were not understood by some WVPO personnel that were interviewed. For example, some personnel thought that controlled documents required a stamp to indicate this status, others stated that documents are marked as uncontrolled, and some personnel were not aware of any status indicator requirements.

The practices for control of documents should be reevaluated by WVPO and WVNS, and increased training provided.

Provide Response by: Within 30 days from receipt of audit report.

Current Status:

Evaluator I. J. Lefman

Date 06/20/91

Evaluating Organization

Proposed Disposition:

n/a see page 2

Scheduled Completion Date: _____

Responsible Organization Representative: _____

Date: _____

3 Evaluating Organization

Is the Deviation Potentially Reportable? ☒ No ☐ Yes (OR No. _____) (Proceed to occurrence Reporting Procedure)

If yes, Evaluator confers with responsible organization to make a final decision.

4 Evaluating Organization

Is a Corrective Action Report Required? ☐ No ☒ Yes (If yes, refer to the instruction for page 2 of this form)

Evaluator _____

Date _____

5 Evaluating Organization

Evaluation of Disposition: ☐ Acceptable ☐ Not Acceptable

Evaluator _____

Date _____

6 Evaluating Organization

Disposition Action Complete:

Verified by _____

Date _____

DEVIATION AND CORRECTIVE ACTION REPORT (DCAR)

Page 2 - Corrective Action Report

DCAR Number: 91EA-WV-AU-001-06

Rev. Number: _____

7

Request for Corrective Action:

DOE/SR-HLW Division is requested to correct the deviation(s) described on page 1 and to provide a response to all of the items requested in Section 8 of this DCAR.

Evaluator

I. J. Leifman

Date 06/20/91

Concurrence By:

W. J. Kehew

Date 07/16/91

DM Mc Intosh
7/25/91

8

Response to the Request for Corrective Action:

A. Reason for the Deviation (Root Cause):

B. Action Taken/Proposed to Investigate and Correct Similar Work:

C. Action Taken to Prevent Recurrence:

D. Date(s) Action(s) will be Complete:

Signature of Organization's Representative: _____ Date _____

9

Evaluation of Corrective Action Response: ☐ Acceptable ☐ Not Acceptable

Not Acceptable Justification:

Evaluator _____ Date _____

Approved By _____ Date _____

10

Corrective Action Complete:

Verified by _____ Date _____

11

Closure of Corrective Action:

Verified by _____ Date _____

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 of 2	
Organization Evaluated: West Valley Project Office (WVPO)		Audit Subject: Criterion 1, "Organization"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/23/92 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/29/92
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S-Sat. U-Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Quality Verification</u>				
1.1.1	Has programmatic verification of quality been independently performed by the WVPO QV Manager with support from qualified and experienced persons?	WVPO-QP-639, Sec 6.2			
1.1.2	Has quality achievement been assessed by by the WVPO QV Manager or by organizations supporting this position and not directly responsible for performing the work?				
1.1.3	Has the WVPO QV Manager assessed that adequate objective evidence of quality is prepared by the WVPO organizations and M&O contractor and maintained as QA records per QP-645?				
1.1.4	Has WVNS QA monitored the WVNS QA program through overview activities?	QM-1, Sec 3.2.13 QAPD-3, Sec 1.2			
	<u>Stop Work</u>				
1.1.5	Through interviews, reviews of UORs, etc., determine whether any events have occurred where work stoppage was considered or taken.				
	a) If work was not stopped, were the decisions appropriate based on the information available at the time?				
	b) If WVPO stopped work, were the stoppages i.s.w. QP-639, section 6.3?	WVPO-QP-639, Sec 6.3			
	c) If WVNS stopped work, were the stoppages i.s.w. QAP 1-1?	QAP 1-1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: (WEST VALLEY DEMONSTRATION PROJECT (WVDP))			Page 2 of 2	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
1.1.6	<u>Quality Concerns</u> Has management taken adequate measures to establish and maintain awareness of the WVPO and WVNS quality concerns programs and the OCRWM program for quality allegations? (Implied requirement, except that DOE employees are to be instructed in the OCRWM program)	WVPO-QP-639, Sec. 6.4 & 6.5 for WVPO WV-990 & QM-1, sec. 3.2.10 for WVNS				
1.1.7	Are personnel familiar with the above programs? (Implied requirement)					
1.1.8	If WVPO personnel have raised any quality problems, allegations, concerns or issues, have these been handled i.a.w. WVPO-QP-639, section 6.4?					
1.1.9	If WVNS personnel have raised any quality problems, allegations, concerns or issues, have these been handled i.a.w. WV 990 and QM-1?					
1.1.10	<u>Dispute Resolution</u> Have any disputes involving quality been resolved i.a.w. applicable procedures?	QAPD-2, sec. 1.2.1.g for WVPO QM-1, sec. 3.2.9 for WVNS				
1.1.11	<u>QA Manager Knowledge and Experience</u> Is there evidence that the WVPO & WVNS quality assurance management incumbents have knowledge and experience in the areas of quality assurance and management?	QAPD-2, sec.1.4.1 for WVPO ? for WVNS				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-AU-WV-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 5	
Organization Evaluated: West Valley Project Office (WVPO)		Audit Subject: Criterion 2, "Quality Assurance Program" (Except Training and Qualification)		Prepared By: <i>[Signature]</i> Audit Team Leader Date: 7/23/92 7/24/92		
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager Date: 7/24/92		
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>Quality Assurance Program and Planning</u>					
2A.1.1	Have QAPDs 2 & 3 been revised to meet RW-0214, rev.4 and ICN 4.1, and have they been accepted by HQ and WVPO respectively?	PEG Document, Sec. 3				
2A.1.2	Has WVPO established procedures for implementing the quality-related activities performed by WVPO?	QAPD-2, Sec. 2.3.2				
2A.1.3	Do these procedures cover the applicable requirements of QAPD-2 and of RW-0214, rev.4 plus ICN 4.1?	PEG Document, Sec. 3 QAPD-2, Sec. 2.3.2				
2A.1.4	Are there documented records of WVPO reviews and approvals of participant documents?	QAPD-2, Sec. 2.3.2				
2A.1.5	Has WVNS established procedures or other documents for:	QAPD-3, Sec. 2.4				
	<ul style="list-style-type: none"> - Maintaining liaison on quality matters with other organizations? - Publishing and maintaining the controlled distribution documents? - Verifying that required training & indoctrination are provided? - Identifying, reviewing and concurring in WAPA-related policies, procedures, and other documents issued by other departments? 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 2 of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
2A.1.5 (Cont'd)	<ul style="list-style-type: none"> - Assisting other departments and level 3 participants with quality planning? - Monitoring work by suppliers and subcontractors, and reviewing and approving their QA documents? - Identifying quality problems and assisting in the development of solutions? - Ensuring that any disagreements or allegations concerning quality are promptly referred to higher level management? - Verifying implementation of solutions and conformance with established requirements? - Assuring that nonconforming items and services are controlled? - Recommending that a stop work notice be issued, etc., when continuation of work could result in conditions defined in this section (2.4)? - Coordinating procurement quality requirements? - Verifying by audit, etc., that quality requirements are met for WAPA activities? - Ensuring that appropriate quality requirements are invoked on items based on assignment of quality levels? - Documenting and reporting nonconforming items and activities? - Ensuring that corrective actions are documented and effectively implemented in a timely manner? - Verifying that the sample analyses of glass composition are performed? - Providing for the identification of required QA records? - Identifying the specific scientific or technical information to be collected, analyzed or used? 	QAPD-3, Sec. 2.4			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
2A.1.6	Have necessary technical and administrative procedures been provided in a timely manner; i.e., before commencement of the activities to which they apply?	QAPD-3, Sec. 2.3				
2A.1.7	Have any necessary future procedures been scheduled, and is their development being tracked? (implied requirement)					
2A.1.8	Have the procedures been reviewed and revised as necessary to RW-0214 and ICN 4.1?	PEG Document, Sec. 3				
	<u>Readiness Reviews</u>					
2A.1.9	Have procedures for readiness reviews been established, and do they satisfy the requirements of QAPD-3, sec. 2.6?	QAPD-3, Sec.2.6				
2A.1.10	Do they provide for WVPO participation and for retention of overall responsibility for adequacy by WVPO?	QAPD-2, Sec. 2.3.3.b				
2A.1.11	Has a readiness review program been established and conducted to assure readiness and adequacy of identified production controls?	WVDP-074, App. I-2				
2A.1.12	If any readiness reviews have been performed, were they done i.e.w. QAPD-3, sec. 2.6 and any applicable procedure(s)?	QAPD-3, Sec. 2.6				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>Graded QA Program</u>					
2A.1.13	Does WVPO assure that QA controls are applied using a graded methodology that applies controls according to importance or significance to quality, including appropriate consideration of NUREG-1318?	QAPD-2, Sec.2.1.b				
2A.1.14	Does QM-2 satisfy the commitments of QAPD-3, section 2.2, for gradation in the application of the QA program?	QAPD-3, Sec. 2.2				
2A.1.15	Have quality levels been assigned by the cognizant engineering or project manager, in coordination with QA, to each system, structure, item or service, or component?	QM 2, Sec. 2.3 Sec. 1.1.2				
2A.1.16	Is the "Q" list current?	QM 2, Sec. 1.1.2				
2A.1.17	Have appropriate control measures and requirements been applied or invoked depending on assigned quality levels?	QM 2, Sec. 1.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>Management Assessment</u>					
2A.1.18	Have procedures been established for the conduct of management assessments?	QAPD-2, Sec. 2.2.1 QAPD-3, Sec. 2.12				
2A.1.19	Do these procedures satisfy the commitments of the respective QAPDs?					
2A.1.20	Have annual management assessments been performed in full and effective compliance with these procedures?					
2A.1.21	Have needed corrective actions and improvements been identified, and have they been (or are they being) tracked to completion? (Inferred requirement)					
2A.1.22	Is there evidence that management of organizations participating in the QA program regularly review and report the status and adequacy of that part of the program which they are executing?	QAPD-3, Sec. 2.13				
	<u>Quality Assurance Program Management - Information Reporting and Tracking</u>					
2A.1.23	Have management information reporting and tracking systems been established that:	QAPD-2, Sec. 2.2.1.b, d QAPD-3, Sec. 2.11				
	a. Track the development of the QA program (and any revisions or additions thereto), and the resolution of significant conditions adverse to quality, QA issues, and trends?					
	b. Provide summaries of required management and QA overview results?					
	c. Report QA program information at least quarterly to appropriate management levels and to the next higher organizational level?					
2A.1.24	Are these systems being effectively implemented?					

Quality Assurance Audit Checklist (Cover Page)

Audit ID. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 8	
Organization Evaluated: West Valley Project Office (WVPO) West Valley Nuclear Services (WVNS)		Audit Subject: Criterion 2, Training and Qualification		Prepared By: <i>[Signature]</i> Audit Team Leader		Date: 7/21/92 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager		Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVPO Staffing</u>					
2B.1.1	Are current position descriptions (PDs) in place for jobs that include quality-affecting responsibilities, and do they identify these responsibilities?	QAPD-2, Sec. 2.4				
2B.1.2	Do the PDs define minimum education, experience and qualification requirements, including, as appropriate, certification to applicable codes and standards?	QAPD-2, Sec. 2.4				
2B.1.3	Is there evidence, including verification of relevant education and experience, that position incumbents meet the PD requirements?					
	<u>WVPO Training</u>					
2B.1.4	Has WVPO established practices and procedures for assuring that applicable personnel are appropriately trained and indoctrinated per Supplement 2S-1?	QAPD-2, Sec. 2.8				
2B.1.5	Has the WVPO Director identified the activities for which training is needed or required?	QP-643, Sec. 6.4				
2B.1.6	Has the WVPO Director annually assessed the need for training for positions within WVPO and documented the method results as well as type of training needed?	QP-643, Sec. 6.4.3				
2B.1.7	Is the Training Needs Assessment commensurate with the scope, complexity and nature of the position activities, and with the impact on end-product quality?	QP-643, Sec. 6.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 2 of 8

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
2B.1.8	Has the WVPO Administrative Program Manager or designee annually updated and issued the WVPO Training Plan, and does it address core, group-specific, project/program/facility-specific, and individualized certification knowledge?	QP-643, Sec. 6.1 QP-643, Sec. 6.5			
2B.1.9	Has each WVPO Program Manager developed and maintained six month short range training plans and reviewed and updated the training needs semiannually?	QP-643, sec. 6.7.1 QP-643, sec. 6.8.1			
2B.1.10	Do the six month short range training plans identify instructors when applicable and assure that they are sufficiently knowledgeable based on personnel records, educational background, or experience? (Also see 2.64)	QP-643, sec. 6.7.1			
2B.1.11	Do the QA training plan and the six month short range training plans provide for fully implementing the Training Needs Assessment?	Implied			
2B.1.12	Have the training plans been (or are they being) implemented?				
2B.1.13	Have the needs for additional indoctrination and training been assessed as assignments, positions and procedures change, and have these needs been (or are they being) met?				
	<u>WVPO Training Courses</u>				
2B.1.14	Have training instructors been selected on the basis of prior knowledge of the course/procedure, experience, education, and/or special training? (Also see 2.60)	QP-643, sec. 6.8			
2B.1.15	Have instructors prepared course plans and training materials and identified learning objectives to be accomplished by the training?	QP-643, sec. 6.6			
2B.1.16	Have instructors conducted training sessions i.e.w. plans, administered and graded exams as applicable, and generated and submitted records to the WVPO Documents Supervisor for retention?	QP-643, sec. 6.7.2			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVPO Training Evaluation</u>					
2B.1.17	Has each WVPO Program Manager, at least biennially, evaluated the effectiveness of the program organization's training program using indicators such as test performance data, instructor and trainee evaluation, and feedback?	QP-643, sec. 6.8.1				
2B.1.18	If the above evaluations are not yet due, are there definite plans for doing them?					
2B.1.19	Has the WVPO QV Manager evaluated QA training annually and provided a summary for the annual QA Program Assessment performed per WVPO-QP-662?	QP-643, sec. 6.8.2				
	<u>WVPO Lead Auditor/Auditor Qualification</u>					
2B.1.20	Has a WVPO procedure for auditor qualification been established?	QAPD-2, sec. 2.4				
2B.1.21	Before the establishment of the above procedure, has WVPO obtained auditors with appropriate NQA-1 qualification and certification from DOE-ID or contracted consultant sources?	QAPD-2, sec.2.4				
	<u>WVPO Documentation and Records</u>					
2B.1.22	Are the training and qualification records of persons associated with WAP activities collected and maintained as privileged records according to the Privacy Act of 1974 as defined in DOE System 80?	QP-643, sec. 6.9				
2B.1.23	Does the assigned WVPO QV Manager maintain oversight of records of training needs assessments and of completed indoctrination and training. The latter includes, as appropriate, examination test grades, evidence of (re)certifications and (re)qualifications, and results of capability demonstrations, periodic evaluations and physical examinations.	QP-643, sec. 6.9				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVNS Staffing</u>					
2B.2.1	Does the WVNS system provide for position descriptions (PDs) for jobs that include quality-affecting responsibilities?					
2B.2.2	Are the PDs required to set forth job duties that include the quality-affecting responsibilities and to define the minimum education, experience and qualification requirements, including, as appropriate, certification to applicable codes and standards?					
2B.2.3	Do PDs meet the foregoing requirements, and are they current?					
2B.2.4	Is there evidence, including verification of relevant education and experience, that position incumbents meet the PD requirements?					
	<u>WVNS Training</u>					
2B.2.5	Have written procedure been established to provide documented indoctrination, training and retraining of personnel performing activities that affect WAP quality?	QAPD-3, sec. 2.6				
2B.2.6	Does the indoctrination and training program provide for: <ul style="list-style-type: none"> - Training personnel in the principles and techniques of the activity being performed? - Instruction as to the purpose, scope and implementation of governing manuals, policies and procedure? - Appropriate training procedures? - Determination of needs for retention, retraining or replacement through annual appraisals of personnel proficiency? 	QAPD-3, sec. 2.6				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	Have department managers:					
2B.2.7	- Identified as requiring indoctrination and training those personnel and managers whose activities affect the quality of WVNS products or services?	QM 2-1, sec. 2.2.1				
2B.2.8	- assured that identified personnel are indoctrinated and trained commensurate with the scope, nature and complexity of the activity, and with the person's education, experience and proficiency?	QM 2-1, sec. 2.2.2				
2B.2.9	- assured that identified personnel are indoctrinated, as applicable, in general criteria including applicable codes, standards and company procedures; applicable QA program elements; and job responsibility and authority?	QM 2-1, sec. 2.2.3 QM 2-2, sec. 2.2.3 QM 2-2, sec. 3.1.2				
2B.2.10	- provided training as needed to achieve initial proficiency and adapt to changes in technology, methods or job responsibilities?	QM 2-1, sec. 2.2.4				
2B.2.11	- evaluated and assessed the need for additional indoctrination and training as assignments, positions and procedures change?	QM 2-1, sec. 2.2.5 QM 2-2, sec. 2.2.8				
2B.2.12	- assured that records of implementation of indoctrination and training are maintained?	QM 2-1, sec. 2.2.6				
2B.2.13	Has the Training and Development Department controlled and coordinated the indoctrination and training requirements, as identified by the Departments, for personnel whose work activities may affect quality?	QM 2-1, sec. 2-3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 6 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
2B.2.14	<u>WVNS Training Courses</u> (See item 2B.2.6, third bullet)					
2B.2.15	<u>WVNS Qualification of Inspection & Test Personnel</u> Have procedures for qualification of inspection and test personnel been established and do they satisfy the requirements of NQA-1, 2S-1 and 2A-1?	QAPD-3, sec. 2.7 QM 2-2, sec. 2.2.6				
2B.2.16	Have department managers: - established training programs for their inspectors and testers?	QM 2-2, sec. 2.2.1				
2B.2.17	- documented training and evaluation records, including qualification records that include the information specified by Attachment A of QM 2-2, and sent these records to the Training and Development Department?	QM 2-2, sec. 2.2.2 & 2.2.4				
2B.2.18	- designated those activities that require qualified inspection & test personnel, including the levels of qualification required for WAP-related inspection & testing?	QM 2-2, sec. 2.2.5				
2B.2.19	- assured that only personnel who have been qualified and who are independent of the organization responsible for the item being inspected or tested are permitted to perform inspection and test activities?	QM 2-2, sec. 2.2.6 & 2.2.7				
2B.2.20	Does the certification documentation for qualified inspectors and testers include the items of section 1.0 of Attachment A of QM 2-2, and:	QM 2-2, sec. 3.1.5 QM 2-2, Att. A				
2B.2.21	- do their education and experience support their levels of qualification?	QM 2-2, sec. 3.2.2				
2B.2.22	- do their training and experience show adequate capability in the activities they are certified to perform?	QM 2-2, sec. 3.1.1 & 3.1.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 7 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
2B.2.23	- Were their capabilities initially determined by a suitable evaluation of education, experience, training and either test results or capability demonstration according to the PD?	QM 2-2, sec. 3.1.4 QM 2-2, Att. A, sec. 2				
2B.2.24	- Were the certificates signed by a certified inspector or tester of a higher level (or by the designated company official for level III certifications)?	QM 2-2, sec. 3.2				
2B.2.25	Does the Training and Development Department maintain record files of all inspection & test personnel, including NDE? <u>WVNS Qualification of NDE Personnel</u>	QM 2-2, sec. 4.0				
2B.2.26	Is there documentation showing that personnel performing NDE have been trained, qualified and certified i.a.w. written practices which meet the applicable requirements of SNT-TC-1A, 1980?	QM 2-2, sec.2.1.2				
2B.2.27	Do the certificates identify the applicable disciplines (RT, MT, PT, UT, ET, NRT, VT and LT)?	QM 2-2, sec. 2.1.2				
2B.2.28	Have personnel performing NDE examinations been currently and appropriately certified? <u>WVNS Qualification of Other Personnel Who Perform Quality Related Activities</u>	QM 2-2, sec. 3.1.1				
2B.2.29	Have procedures been established for the qualification and certification of personnel who perform waste acceptance special processes as defined in criterion 9?	OAPD-3, sec. 2.7				
2B.2.30	Do the above personnel include those who take and analyze samples?					
2B.2.31	Do the procedures implement NQA-1, 2S-1 excluding paragraphs 2.7 and 2.8?	OAPD-3, sec. 2.7				
2B.2.32	Have the affected personnel been identified, and have they been qualified i.a.w. the applicable procedures?	OAPD-3, sec. 2.7				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 8 of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVNS Lead Auditor/Auditor Qualification</u>					
2B.2.33	Does the procedure for Qualification of Quality Assurance Program Auditors (QM-3) comply with NQA-1, 2S-3 & 2A-3?	QAPD-3, sec. 2.7				
2B.2.34	Is there a certification form for each Lead Auditor, and do the entries on these forms demonstrate that the initial qualifications met requirements?	QM 2-3, sec. 3.0 & Att. A				
2B.2.35	Were the training needs of each prospective Lead Auditor evaluated by management, and was necessary training provided?	QM 2-3, sec. 3.2				
2B.2.36	Are education and experience claims supported by resumes or equivalent documents, and do examination records show passing scores?					
2B.2.37	Are there adequate bases for annual Lead Auditor requalifications, and have these been correctly documented?	QM 2-3, sec. 3.5 & 5.3				
2B.2.38	Is there evidence that assigned auditors either have had the necessary competence (developed as per section 2.2 of QM 2-3), or have performed audits under the guidance of a qualified Lead Auditor?	QM 2-3, sec. 2.2 & 4.1				

Quality Assurance Audit Checklist

LD. No. 92EA-WV-AU-001		Surveillance Area/Subject: WEST VALLEY DEMONSTRATION PROJECT (WVDP) Criterion 3 (Design Control)		Page 1 of 2
Organization Evaluated: West Valley Project Office (WVPO)		Date(s) of Evaluation: July 27-31, 1992	Prepared By: <i>[Signature]</i> (for) J. E. Hennessey, EM-343 (ATL)	Date: 7/28/92 7/20/92
Team Leader: J. E. Hennessey, EM-343		Type of Audit: QA Program Qualification	Approved By: <i>[Signature]</i> J. E. Hennessey, EM-343 (QAPM)	Date: 7/28/92 7/20/92
Attribute/Item/Question		References	Description of Activities & Items Examined, Who Discussed With, Results	Verifier Initials/ Date
No.	Description			
1	Verify delegation of implementation responsibility for design control activities. Review and evaluate the adequacy of the document that assigns the specific design control responsibilities to the major Project participants.	WVDP-074, QAPD-2, Rev. 2, Sec. 3.1 WVDP-074, QAPD-3, Rev.2, Sec. 3.1		
2	Determine whether the procedure(s) describe the technical review process and provide attention to design error and deficiency control, design changes, computer software design and control, technical and peer reviews, control of experimental and development activities, qualification of data, and modification control in accordance with the requirements in this section of the QAPD.	WVDP-074, QAPD-2, Rev. 2, Sec. 3.1 WVDP-074, QAPD-3, Rev. 2, Sec. 3.1-3.7		

Quality Assurance Audit Checklist

I.D. No. 92EA-WV-AU-001		Audit Area/Subject: West Valley Demonstration Project (WVDP) QA Program Qualification - Criterion 3		Page <u>2</u> of <u>2</u>
Attribute/Item/Question		References	Description of Activities & Items Examined, Who Discussed With, Results	Verifier Initials/ Date
No.	Description			
3	<i>Determine whether the procedure(s) establishing the peer review process addresses the provisions of NUREG-1297, "Generic Technical Position on Peer Reviews for High Level Waste Repositories," as well as requirements stated in this QAPD.</i>	RW-0214, Rev. 4 NUREG-1297 WVDP-074, QAPD-2, Rev.2, Sec. 3.23-3.27		
4	<i>Determine the extent to which WVPO monitors the Project participants' design control practices and implements a verification program to assess their adequacy and effectiveness. Determine organization which has primary responsibility? Determine whether this responsibility is incorporated into the procedure(s). Determine whether this approach to monitoring appears to be effectively implemented.</i>	WVDP-074, QAPD-2, Rev. 2, Sec. 3.1 WVDP-074, QAPD-3, Rev. 2, Sec. 3.8-3.22, 3.28-3.29		

Quality Assurance Audit Checklist

I.D. No. 92EA-WV-AU-001		Surveillance Area/Subject: WEST VALLEY DEMONSTRATION PROJECT (WVDP) - Criterion		Page 1 of 3
Organization Evaluated: West Valley Project Office (WVPO)		Date(s) of Evaluation: July 27-31, 1992	Prepared By: <i>[Signature]</i> J. E. Hennessey, EM-343 (ATL)	Date: <i>7/24/92</i> 7/20/92
Team Leader: J. E. Hennessey, EM-343		Type of Audit: QA Program Qualification	Approved By: <i>[Signature]</i> J. E. Hennessey, EM-343 (QAPM)	Date: <i>7/24/92</i> 7/20/92
Attribute/Item/Question		References	Description of Activities & Items Examined, Who Discussed With, Results	Verifier Initials/Date
No.	Description			
1	Determine WVPO procurement of quality-related items or services which support the vitrification project. Define the process of acquiring services.	WVDP-074, QAPD-2. Rev. 2, Sec. 4.1 WVDP-074, QAPD-3, Rev. 2, Sec. 4.1-4.2 ASME NQA-1, BR-4		
2	Verify the practice for control of procurement documents, coordination and implementation of procurement planning, procurement activities among Project participants, and review of procurement documents for completeness and accuracy.	WVDP-074, QAPD-2. Rev.2, Sec. 4.1 WVDP-074, QAPD-3, Rev.2, Sec. 4.3-4.5 ASME NQA-1, BR-4		

Quality Assurance Audit Checklist

LD. No. 92EA-WV-AU-001		Audit Area/Subject: West Valley Demonstration Project (WVDP) QA Program Qualification - Criterion 4		Page <u>2</u> of <u>3</u>
Attribute/Item/Question		References	Description of Activities & Items Examined, Who Discussed With, Results	Verifier Initials/ Date
No.	Description			
3	Review procurement documents. Verify whether it specifies design bases and deliverables including records requirements and turnover intervals, software code ownership, etc.	WVDP-074, QAPD-2, Rev. 2, Sec. 4.1-4.2 WVDP-074, QAPD-3, Rev. 2, Sec.4.3-4.5 ASME NQA-1, BR-4		
4	Verify whether procurement documents require suppliers to have QA programs, i.e., delegation of QA requirements.	WVDP-074, QAPD-3, Rev. 2, Sec. 4.3-4.5 ASME NQA-1, BR-4, Supplement 4S-1		

Quality Assurance Audit Checklist

I.D. No. 92EA-WV-AU-001		Audit Area/Subject: West Valley Demonstration Project (WVDP) QA Program Qualification - Criterion 4		Page 3 of 3
Attribute/Item/Question		References	Description of Activities & Items Examined, Who Discussed With, Results	Verifier Initials/ Date
No.	Description			
5	<i>Verify whether WVPO monitor the procurement document control practices of Project participant activities related to vitrification project to assure proper implementation and adequacy in compliance with the provisions of ASME NQA-1 and Supplements, and RW-0214 requirements. Review reports from review activities of Project participants.</i>	WVDP-074, QAPD-2, Rev. 2, Rev. 4.1 ASME NQA-1, BR-4, Sec. 3		

Quality Assurance Audit Checklist Supplement (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 of 12	
Organization Evaluated: West Valley Project Office (WVPO) AND WEST VALLEY NUCLEAR SERVICES (WVNS)		Audit Subject: CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS		Prepared By: W. McClanahan / C. McKee <i>J E Keeney 7/27</i>	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager <i>J T. Conway</i>	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
5.1	<u>WVPO</u> Does WVPO have a procedural control system for QA procedures which provide instruction for activities affecting Quality?	WVDP-074, QAPD2 Sec. 5.1			
5.2	Do procedures assign responsibility for preparation, review, approval, release, issue, distribution and change control?	WVDP-074, QAPD2 Sec. 5.1			
5.3	Is there a list of WVPO QA implementing procedures? Where is it located? Who is responsible for maintenance?	WVDP-074, QAPD2 Sec. 5.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 2 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.4	Are records requirements specified in the procedures?	WVDP-074, QAPD2 Sec. 5.1				
5.5	Does the QV Manager participate in and monitor VPO's execution of those procedures related to development, qualification and production activities?	WVDP-074, QAPD2 Sec. 5.1				
5.6	Has the QV Manager performed surveillances or arranged for independent audits of the WVPO QA practices to assure implementation and adequacy?	WVDP-074, QAPD2 Sec. 5.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 3 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.7	How many surveillances or audits of procedures have been made within the past 12 months within WVPO? On WVNS?					
5.8	Has WVPO monitored and periodically reviewed major participant procedural practices related to waste form development, qualification and production to assure proper implementation and adequacy?	WVDP-074, QAPD2, Sec. 5.1				
5.9	Does the contract with WVNS specify requirements for procedures, instruction, and drawings?	WVDP-074, QAPD2 Sec. 5.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 4 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.10	Has the WVPO QV Manager verified that adequate, complete, accurate and current documents are developed and controlled, as appropriate for implementation of the WVPO QA Program?	WVPO-QP-642, sec.5.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Page 5 of 12

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
5.11	<p style="text-align: center;"><u>WVNS</u></p> <p>Do WVNS procedures ensure that documents generated to support WAP activities such as processing, equipment maintenance, testing, inspection and product handling are prescribed in sufficient detail to ensure appropriate controls and provide documented verification of satisfactory accomplishment?</p>	WVDP-074, QAPD3, sec. 5.1			
5.12	Do WVNS procedures describe organizational responsibilities for assuring that quality related activities are specified and implemented by procedures?	WVDP-074, QAPD3, sec. 5.1			
5.13	Are independent reviews of the procedures performed by the originating organization to assure technical adequacy and inclusion of quality requirements?	WVDP-074, QAPD3, sec. 5.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 6 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.14	Do procedures identify the specific steps required to finalize instructions, procedures and drawings?	WVDP-074, QAPD3, sec. 5.2				
5.15	Are independent reviews performed by technical specialists and QA before procedures are approved?	WVDP-074, QAPD3, sec. 5.1				
5.16	Are methods to ensure resolution of comments by reviewing organizations prior to the document being released specified and implemented?	WV-100, Sec. 5.8				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 7 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.17	<p>Is there evidence that QA Procedures (QAPs) are approved by the following as a minimum:</p> <ul style="list-style-type: none"> a) QA Manager b) Dept. Manager c) ESH&QA Manager d) Projects Records <p>Where are signatures documented?</p>	QAP 5-1, Sec. 5.2.1				
5.18	<p>Has the QAM identified the need for and assigned responsibility for the development and/or review of procedures detailing quality related activities?</p>	QAP 5-1, Sec 5.1.1				
5.19	<p>Have QAPs been written to be consistent with the requirements of the QA Manual and the format of Attachment A?</p>	QAP 5-1, Sec. 5.1.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 8 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.20	Have the QA Manager and Projects and Publications Manager reviewed and approved WVNS Policies and Procedures, Department Procedures and Service Documents?	WV-100, Sec. 4.6				
5.21	When QAPs impose responsibility for a specific function upon departments other than QA, have the managers of those departments approved the QAPs?	QAP 5-1, Sec. 5.2.1				
5.22	Have QAPs been reviewed and comments resolved i.e.w. QAP 5-1, sections 5.2.1 and 5.3?	QAP 5-1, Secs. 5.2.1 & 5.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 9 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.23	Have QAPs been approved and distributed i.a.w. sections 5.5 and 5.6 of QAP 5-1?	QAP 5-1, Secs. 5.4 & 5.5				
5.24	Have any cancelled QAPs been cancelled in writing by the QAM using WV-1004, and have these forms been forwarded to Records Management for final maintenance and cancellation of the procedure?	QAP 5-1, Sec. 5.6				
5.25	Are EPs reviewed and approved by: a) Author's Department Manager b) Author's Staff Manager c) Cognizant Staff Managers d) QA Manager e) Project Records and Publications Manager f) Plant Engineering Manager	EP-3-005, Sec. 4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Page 10 of 12

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
5.26	Have department managers implemented their responsibility for preparing, coordinating independent reviews, issuing and implementing procedures which provide quality related activities?	QM-5, Sec. 2.1			
5.27	Have department managers implemented their responsibility for originating, coordinating and issuing detailed work instructions, as controlled documents, to accomplish fabrication, modification and maintenance activities?	QM-5, Sec. 2.1			
5.28	Does Records Management maintain lists of all approved and controlled WVNS procedures, manuals and documents, and make their distribution?	QM-5, Sec. 2.2			

Quality Assurance Audit Checklist

(Continuation Page)

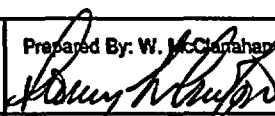
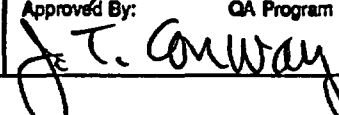
Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 11 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.29	Does Quality Assurance: <ul style="list-style-type: none"> - Review and concur with all QL A, B and C documents? - Review and concur with quality-related fabrication, modification and maintenance instructions to assure incorporation of appropriate QV steps? - Prepare detailed inspection instructions for quality-related source, receiving and installation activities? - Prepare and update the QM Manual? 	QM 5, Sec. 2.3				
5.30	Do cognizant engineers: <ul style="list-style-type: none"> - Initiate work authorization documents for fabrication, modification or maintenance activities and assign the appropriate quality levels? - Prepare design documents and obtain appropriate reviews and approvals i.e.w. QM 3? - Obtain appropriate review and/or approval of documents from affected organizations? - Assure that approved procedures are available to control quality related activities? 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 12 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.31	Are EPs reviewed and approved by: <ul style="list-style-type: none"> - Author's department manager? - Author's staff manager? - Cognizant staff managers? - QA Manager? - Project Records and Publications Manager? - Plant Engineering Manager? 	EP-3-005, Sec. 4.2				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 12	
Organization Evaluated: West Valley Project Office (WVPO) West Valley Nuclear Services (WVNS)		Audit Subject: CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS		Prepared By: W. McClanahan 		Date: 7/21/92 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager 		Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.1	<u>WVPO</u> Does WVPO have a procedural Control System for QA procedures which provide instruction for activities affecting Quality?	WVDP-074, QAPD2 Sec. 5.1				
5.1.2	Do procedures assign responsibility for preparation, review, approval, release, issue, distribution and change control?	WVDP-074, QAPD2 Sec. 5.1				
5.1.3	Is there a list of WVPO QA implementing procedures? Where is it located? Who is responsible for maintenance?	WVDP-074, QAPD2 Sec. 5.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 2 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.4	Are Records requirements specified in each procedure?	WVDP-074, QAPD2 Sec. 5.1				
5.1.5	How does the QV Manager participate in the execution of these procedures?	WVDP-074, QAPD2 Sec. 5.1				
5.1.6	Has the QV Manager performed surveillances or arranged for independent audits of the WVPO QA practices to assure implementation and adequacy?	WVDP-074, QAPD2 Sec. 5.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 3 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.7	How many surveillances or audits of procedures have been made within the past 12 months within WVPO?	WVDP-074, QAPD2 Sec. 5.1				
5.1.8	How many surveillances or audits of procedures have been conducted by WVPO on WVNS?	WVDP-074, QAPD2 Sec. 5.1				
5.1.9	Does the Contract with WVNS specify requirements for procedures, instruction, and drawings.	WVDP-074, QAPD2 Sec. 5.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 4 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.10	How does the QV Manager verify that adequate, complete, accurate and current documents are developed and controlled?	WVDP-074, QAPD2 Sec. 5.1				
5.1.11	Who has the WVPO Program Manager assigned to document control activities and where do they fit into the organization?	WVDP-074, QAPD2 Sec. 5.1				
5.1.12	How does the Program Manager determine if a document is to be controlled?	WVDP-074, QAPD2 Sec. 5.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 5 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.13	Does the Control System provide for: a) Unique document identification b) Established format c) Review and approve d) Release e) Controlled distribution f) Obsolete/unneeded Documents	WVDP-QA-642, Sec. 6.1-6.6				
5.1.14	Who is the assigned WVNS Records Manager?	WVDP-QA-642, Sec. 6.7.1				
5.1.15	Does the Records Manager maintain a list of controlled WVPO procedures and assigned holders for each procedure?	WVDP-QA-642, Sec. 6.7.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 6 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.1.16	<p>Does the procedure list include:</p> <ul style="list-style-type: none"> a) Document numbers and title b) Revision status and release date c) Cognizant WVPO Program Manager d) Notification of annual review dates 	WVDP-QA-642, Sec. 6.7.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 7 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.1	<p style="text-align: center;"><u>WVNS</u></p> <p>Does QA Review and Concur with other departments procedures affecting Quality?</p>	QM-6, Sect 2.3.1				
5.2.2	What has been done by QA to ensure procedures are properly distributed and being used at the workplace?	QM-6, Sec. 2.3.2				
5.2.3	How does QA verify that activities affecting quality level A,B, and C are performed by instruction?	QM-6, Sec. 2.3.5				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 8 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.4	Has the QA Manager and Projects Records and Publications Manager reviewed and approved WVNS Policies and Procedures, Department Procedures and Service documents?	WV-100, Sec. 4.6				
5.2.5	Does Records Management have documented evidence of annual review for documents listed in Attachment A?	WV-100, Sec. 5.1				
5.2.6	Is a 10 working day review cycle being maintained for P&Ps, Department Procedures, and Service documents?	WV-100, Sec. 5.6				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 9 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.7	Do procedure formats follow the guidelines of WV-100 attachment B?	WV-100, Sec. 6.3				
5.2.8	Has Records Management ever issued "Interim Use" procedures and were rationale documents prepared and on file? Were documents stamped "Interim Use" and converted to normal procedures within 90 calendar days?	WV-100, Sec. 6.7				
5.2.9	Has WVNS ever made administrative changes to approved procedures without going through the original approval cycle? Did the QA Manager approve?	QAP-5-1, Sec. 4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 10 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.10	<p>Is there evidence that QA procedures are approved by the following as a minimum:</p> <ul style="list-style-type: none"> a) QA Manager b) Dept. Manager c) ESH&QA Manager d) Projects Records <p>Where are signatures documented?</p>	QAP 5-1, Sec. 5.2.1				
5.2.11	<p>Does Records Management have WV-1004 and 1004(a) for all QA procedures that have been issued?</p>	QAP 5-1, Sec. 5.5.1				
5.2.12	<p>Have any QAPs been canceled? Was it documented by the QA Manager and the WV-1004 in the files at the Records Center?</p>	QAP 5-1, Sec. 5.6				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 11 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.13	Does Records Management have a Design Document Report? How is revision control maintained?	EP-3-005, Sec. 2.4				
5.2.14	Are drawings with outstanding ECNs stamped with "ECN pending" and ECN numbers recorded on the print?	EP-3-005, Sec. 4.6				
5.2.15	Are EPs reviewed and approved by: a) Author's Department Manager b) Author's Staff Manager c) Cognizant Staff Managers d) QA Manager e) Project Records and Publications Manager f) Plant Engineering Manager	EP-3-005, Sec. 4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit ID. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 5 - INSTRUCTIONS, PROCEDURES, AND DRAWINGS			Page 12 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
5.2.14	Are EPs reviewed annually and documentation of the annual review in Records Management?	EP-5-001, Sec. 4.8				

Quality Assurance Audit Checklist Supplement

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 18	
Organization Evaluated: West Valley Project Office (WVPO) AND WEST VALLEY NUCLEAR SERVICES (WVNS)		Audit Subject: CRITERIA 6 - DOCUMENT CONTROL		Prepared By: W. McClanahan / C. McKee <i>J.E. Heenan 7/27</i>		Date: 7/25/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager <i>J.T. Conway</i>		Date: 7/27/92
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.1	<u>WVPO</u> Has WVPO established and implemented document control practices that apply to those types of documents prepared by WVPO and identified in sections 5.0, 17.0 and 18.0 of QAPD-27	WVDP-074, QAPD-2 Sec. 6.1				
6.2	Are documents originated by WVPO processed in a controlled manner to assure: <ul style="list-style-type: none"> - Uniformity of format? - Identification of the originator and date of origin, and a mechanism for verification of authenticity of information? - Positive review and approval by qualified persons? - Prompt and controlled distribution, including receipt control? - Efficient revision of documents when necessary? - Inclusion of adequate, well stated QA requirements? 	WVDP-074, QAPD-2 Sec. 6.1				
6.3	Are documents reviewed for adequacy by the originator, the QV Manager and/or the WVPO Director as determined by the originator and/or the ESH&QV Manager?	WVDP-074, QAPD-2 Sec. 6.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 2 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.4	Are there records of the reviews of draft controlled documents demonstrating that the comments of reviewing personnel were resolved prior to final approval?	WVDP-074, QAPD-2, Sec. 6.1				
6.5	Are changes or revisions reviewed and approved by the same organizations that performed the original review and approval?	WVDP-074, QAPD-2, Sec. 6.1				
6.6	Has the QV Manager established a list of WVPO Controlled Documents and does Records Management maintain this list?	WVDP-074, QAPD-2, Sec. 6.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL

Page 3 of 18

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
6.7	As appropriate, do controlled documents or manuals have assigned copy distribution and receipt control, including individually numbered copies, signed receipts and periodic control verification?	WVDP-074, QAPD-2 Sec. 6.1			
6.8	Has the QV Manager periodically performed surveillance or arranged for independent audit of the WVNS document control system to assure implementation and adequacy?	WVDP-074, QAPD-2 Sec. 6.1			
6.9	Has WVPO monitored WVNS document control systems and periodically reviewed these systems by audit or surveillance to assure implementation and adequacy?	WVDP-074, QAPD-2, Sec. 6.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL

Page 4 of 18

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
6.10	Has the WVPO Administrative Program Manager assigned responsible individual(s) for document control?	WVPO-QP-642, Sec. 5.2			
6.11	Has the WVPO Administrative Program Manager identified and established appropriate procedures pertaining to personnel within their area of responsibility, and ensured that these documents are prepared, issued and maintained i.a.w. WVPO-QP-642?	WVPO-QP-642, Sec. 5.2			
6.12	Have assigned WVNS Records Management individuals maintained release records and distribution of controlled distribution manuals or documents, personnel distribution lists, and complete review and change records?	WVPO-QP-642, Sec. 5.4			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL

Page 5 of 18

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
6.13	Has an identification system been established for each type of document such that each individual document is uniquely identified?	WVPO-QP-642, Sec. 6.1			
6.14	Are the release date and the WVPO Director's signature authorizing use shown on the first page of each document?	WVPO-QP-642, Sec. 6.4			
6.15	Are the distribution of and changes to controlled distribution manuals or documents controlled in such a manner as to assure that each document holder receives the necessary changes to maintain current status?	WVPO-QP-642, Sec. 6.5			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL

Page 6 of 18

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
6.16	Are receipt forms for controlled distribution documents or incorporation of changes signed and dated by the document holder and returned to the office of the person responsible for distribution?	WVPO-QP-642, Sec. 6.5			
6.17	Have documents for which receipts have not been received within 30 working days from date of issue been recalled, or has other followup action been taken?	WVPO-QP-642, Sec. 6.5			
6.18	Is a controlled distribution list maintained by the individual responsible for document issue?	WVPO-QP-642, Sec.5.4			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 7 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.19	<p>Does the assigned WVNS Records Management individual:</p> <ul style="list-style-type: none"> - Distribute released documents as directed by the cognizant WVPO program manager? - Maintain records of document distribution, including current listings of assigned holders? - Maintain receipt records? 	WVPO-QP-642, Sec. 6.7.1				
6.20	<p>Does WVNS Records Management maintain a listing or log of WVPO controlled documents that provides:</p> <ul style="list-style-type: none"> - Document number, title, and record of controlled distribution? - Revision status, including latest release date? - Name of cognizant WVPO program manager? - Notification in a timely manner of annual review due dates? 	WVPO-QP-642, Sec. 6.7.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 8 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.21	<p style="text-align: center;"><u>WVNS</u></p> <p>Does WVNS have procedures to control the issuance of documents that define WAP activities, and do they include change control and the removal of superseded documents?</p>	WVDP-074, QAPD-3, Sec. 6.1				
6.22	<p>Are master document lists maintained to assure that only the current revisions are available for use and that only verified and fully approved documents are released for use?</p>	WVDP-074, QAPD3 Sec. 6.3				
6.23	<p>Does the WVNS document review process include:</p> <ul style="list-style-type: none"> - The use of qualified technical specialists using pertinent background information" - The resolution of review comments before the documents are released? - Maintenance of records providing evidence of comment resolution? 	WVDP-074, QAPD3 Sec. 6.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 9 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.24	<p>Does the WVNS document control process:</p> <ul style="list-style-type: none"> - Provide for the review and approval of document changes by the same organizations or organizational functions that performed the original review and approval? - Identify the types of documents controlled, including the cognizant organizations? - Provide for individual numbering of controlled documents or manuals, and for a receipt acknowledgement system? - Assure that documents are issued to where the work will be performed before starting the work? - Prohibit the use of unreleased documents? - Provide for the removal of obsolete or superseded documents? 	<p>WVDP-074 QAPD-3, Secs. 6.2, 6.4, 6.5 & 6.6</p> <p>QM 6, secs.3.2, 2.1.1, 4.2</p>				
6.25	<p>Is QA on distribution for all Controlled Document lists which reflect latest revisions?</p>	<p>QM-6, Sec. 2.1.3</p>				
6.26	<p>Do revised documents identify the pages affected, reasons for change, and basis for conclusion that the revised document continues to satisfy upper-tier requirements?</p>	<p>QM 6, sec. 4.2</p>				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 10 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.27	Do departmental procedures identify responsibilities for preparing, reviewing and approving the instructions, drawings and other documents governing quality related activities?	QM 6, sec.2.1.4				
6.28	Are annual (or within 12 months of last revision) reviews made of procedures for accuracy, completeness, applicability and ability to fully implement the latest requirements?	QM 6, sec. 2.1.5				
6.29	Have applicable procedures been changed within 120 days from the date that changes in organization, mission or assignment become official, or within 120 days after receiving direction to implement a revised upper tier document, such as an applicable DOE Order (assuming that a revision is found to be necessary)?	QM 6, secs. 2.1.6 & 2.1.7				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 11 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.30	Does Records Management issue all controlled distribution documents and subsequent revisions?	QM 6, Sec. 2.2				
6.31	Has QA: <ul style="list-style-type: none"> - Reviewed and concurred with other departments' procedures affecting quality? - Verified, through surveillance or audit, that proper revisions of approved procedures are distributed to the workplace and are being used and properly implemented? - Verified that facilities and procedures exist to properly store and protect documents? - Assisted in developing document control procedures and in identifying record documents? - Verified that activities affecting QL A, B, or C items are prescribed by and performed i.a.w. documented instructions, procedures or drawings? - Developed and revised all QA procedures and instructions? 	QM 6, Sec. 2.3				
6.32	Are all approved WVNS controlled procedures, manuals and documents forwarded to Records Management for distribution, issuance, retention and storage?	QM 6, Sec 3.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 12 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.33	Have the distribution and issuance of all controlled procedures been i.a.w. approved procedures?	QM 6, Sec. 3.3				
6.34	Have only approved documents been used for quality related activities?	QM 6, Sec. 3.4				
6.35	Have documents requiring revision been controlled, reviewed and processed in the same manner as the original issue document?	QM 6, Sec. 4.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 13 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.36	Are document reviews documented on WV-1004 forms and resolution documents on WV-1004(a)?	WV-100, Sec. 6.4.2 and 6.4.3				
6.37	Verify that the WV-1800 form is being used for requesting drawings.	EP-3-005, Sec. 3.3				
6.38	Does Records Management have a log of documents released for "Engineering Use Only?" Are ECNs issued to remove the "EUO" status? Were WV-1840, Review Transmittal, WV-1809, Action Item Chart and Design Review Closeout Letter (QL-8) attached to the ECN for closure?	EP-3-011, Sec. 4.1.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 14 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.39	Is the review period of 10 working days being achieved when the Document/Design Review Transmittal (WV-1840) is sent to reviewer?	EP-3-011, Sec. 4.16				
6.40	Does Records Management maintain a distribution list for Engineering Documents? What documents are included in the list?	EP-6-001, Sec. 3.1				
6.41	Does Records Management maintain acknowledgement receipts for distributed Engineering documents?	EP-6-001 Sec. 2.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL

Page 15 of 18

Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date
No.	Description				
6.42	Has it been necessary to send follow up notices because of delinquency in receiving the Receipt and Acknowledgement forms? Have controlled manuals been declared "uncontrolled?" What action was taken?	EP-6-001, Sec. 5.1.5			
6.43	Are "uncontrolled documents" distributed with a WV-1008 form? If "uncontrolled" copies have revisions distributed by Records Management, why not make everything a controlled copy? Review the validity of section 5.2	EP-6-001, Sec. 5.2.1 and 5.2.3			
6.44	Are Drawings, Specifications, Policies and Procedures, Test Plans, Test Requests, Test Procedures included in the Document Control System and are each approved by a QA Engineer if designated Quality Level A, B or C?	QAP-6-1 Sec. 3.2			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 16 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.45	Is there a Q-list which identifies activities as Quality Level A, B, C or N? Does QA review and approve documents that are QL A, B or and their revisions?	QAP 6-1 Sec. 3.2 and 4.1				
6.46	Where is the "Q" classification indicated on documents?	Implied				
6.47	Does Records Management have a Master Forms Control List? Is it published quarterly and is it reviewed annually by each Department Manager?	WV-102 Sec. 6.1.E				

Quality Assurance Audit Checklist

(Continuation Page)

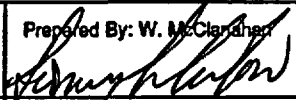
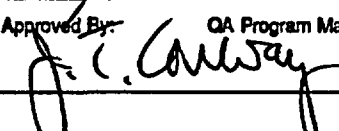
Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 17 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.48	Does Records Management have a current list of Controlled Distribution Documents?	WV-102, Sec. 6.1.D				
6.49	Does Records Management have a distribution list for each controlled document and are reviewer comments on file?	WV-102, Sec. 6.1.1				
6.50	Does Records Management have a Design Document Report? How is revision control maintained?	EP-3-005, Sec. 2.4				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 18 of 18	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S = Sat. U = Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.51	Are drawings with outstanding ECNs stamped with "ECN pending" and ECN numbers recorded on the permit?	EP-3-005, Sec. 4.6				
6.52	Are EPs reviewed and approved by: a) Author's Department Manager b) Author's Staff Manager c) Cognizant Staff Managers d) QA Manager e) Project Records and Publications Manager f) Plant Engineering Manager	EP-3-005, Sec. 4.2				
6.53	Are EPs reviewed annually and documentation of the annual review in Records Management?	EP-5-001, Sec. 4.8				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 12	
Organization Evaluated: West Valley Project Office (WVPO) West Valley Nuclear Services (WVNS)		Audit Subject: CRITERIA 6 - DOCUMENT CONTROL		Prepared By: W. McClanahan 		Date: 7/21/92 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager 		Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.1.1	<u>WVPO</u> What organization is assigned responsibility for control of approved documents?	WVDP-074, QAPD2 Sec. 6.1				
6.1.2	What documents are included in the Control System?	WVDP-074, QAPD2 Sec. 6.1				
6.1.3	Are there procedures to control: a) Format b) Originator and date c) Verification of Authority d) Review and approval	WVDP-074, QAPD2 Sec. 6.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 2 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.1.4	Are all WVPO procedures reviewed by the QV Manager and WVPO Director?	WVDP-074, QAPD2 Sec. 6.1				
6.1.5	How does the originator and ESH&QV Manager determine the extent of necessary reviews.	WVDP-074, QAPD2 Sec. 6.1				
6.1.6	Has the QV Manager established a list of WVPO Controlled Documents and does Records Management maintain this list?	WVDP-074, QAPD2 Sec. 6.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 3 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.1.7	How many audits have been made of the Document Control System by the QV manager in the past 12 months?	WVDP-074, QAPD2 Sec. 6.1				
6.1.8	How many surveillances or audits of the WVNS Document Control System have been made by WVPO in the past 12 months?	WVDP-074, QAPD2 Sec. 6.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 4 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.1	<p style="text-align: center;"><u>WVNS</u></p> <p>Does WVNS have a procedure for document Control and does it include change control?</p>	WVDP-074, QAPD3 Sec. 6.1				
6.2.2	Is a Master Document list available for Controlled Documents?	WVDP-074, QAPD3 Sec. 6.3				
6.2.3	Is there a list of authorized personnel for review and approval of each controlled document?	WVDP-074, QAPD3 Sec. 6.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 5 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.4	How many Surveillances or audits have been conducted for document control within the last 12 months?	WVDP-074 QAPD 3 Sec. 6.7				
6.2.5	Is QA on distribution for all Controlled Document lists which reflect latest revisions?	QM-6, Sec. 2.1.3				
6.2.6	Do revised documents identify pages affected, reason for change, basis for conclusion that the document still satisfies the upper tier documents?	QM-6, Sec. 4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 6 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.7	Are document reviews documented on WV-1004 forms and resolution documents on WV-1004(a)?	WV-100, Sec. 6.4.2 and 6.4.3				
6.2.8	Verify that the WV-1800 form is being used for requesting drawings.	EP-3-005, Sec. 3.3				
6.2.9	Does Records Management have a log of documents released for "Engineering Use Only"? Are ECNs issued to remove the "EUO" status? Were WV-1840, Review Transmittal, WV-1809, Action Item Chart and Design Review Closeout Letter (QL-B) attached to the ECN for closure?	EP-3-011, Sec. 4.1.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 7 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.10	Is the review period of 10 working days being achieved when the Document/Design Review Transmittal (WV-1840) is sent to reviewer?	EP-3-011, Sec. 4.16				
6.2.11	Does Records Management maintain a distribution list for Engineering Documents? What documents are included in the list?	EP-6-001, Sec. 3.1				
6.2.12	Does Records Management maintain acknowledgement receipts for distributed Engineering documents?	EP-6-001 Sec. 2.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 8 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.13	Has it been necessary to send follow up notices because of delinquency in receiving the Receipt and Acknowledgement forms? Have controlled manuals been declared "uncontrolled"? What action was taken?	EP-6-001, Sec. 5.1.5				
6.2.14	Are "uncontrolled documents" distributed with a WV-1008 form? If "uncontrolled" copies have revisions distributed by Records Management, why not make everything a controlled copy? Review the validity of section 5.2	EP-6-001, Sec. 5.2.1 and 5.2.3				
6.2.15	Are Drawings, Specifications, Policies and Procedures, Test Plans, Test Requests, Test Procedures included in the Document Control System and are each approved by a QA Engineer if designated Quality Level A, B or C?	QAP-6-1 Sec. 3.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 9 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.16	Is there a Q-list which identifies activities as Quality Level A, B, C or N? Who develops the Q list and who provides review and approval?	QAP-6-1 Sec. 3.2 and 4.1				
6.2.17	Where is the "Q" classification indicated on documents?	QAP-6-1, Sec. 3.2				
6.2.18	Does Records Management have a Master Forms Control List? Is it published quarterly and is it reviewed annually by each Department Manager?	WV-102 Sec. 6.1.E				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 10 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.19	Does Records Management have a current list of Controlled Distribution Documents?	WV-102, Sec. 6.1.D				
6.2.20	Does Records Management have a distribution list for each controlled document and are reviewer comments on file?	WV-102, Sec. 6.1.J				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 11 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.21	Does Records Management have a Design Document Report? How is revision control maintained?	EP-3-005, Sec. 2.4				
6.2.22	Are drawings with outstanding ECNs stamped with "ECN pending" and ECN numbers recorded on the permit?	EP-3-005, Sec. 4.6				
6.2.23	Are EPs reviewed and approved by: a) Author's Department Manager b) Author's Staff Manager c) Cognizant Staff Managers d) QA Manager e) Project Records and Publications Manager f) Plant Engineering Manager	EP-3-005, Sec. 4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP) CRITERIA 6 - DOCUMENT CONTROL			Page 12 of 12	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
6.2.24	Are EPs reviewed annually and documentation of the annual review in Records Management?	EP-5-001, Sec. 4.8				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 Of 8	
Organization Evaluated: WVPO & WVNS		Audit Subject: Criteria 7-15 from QAPD-3, Rev. 2. Verify that applicable requirements from the QARD have been incorporated into the implementing Procedures. Applicability to be determined during the course of the audit.		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
7.1.1.	<p>Verify that implementing procedures (QAPs) have been developed and approved and include the following QAPD requirements.</p> <p><u>CONTROL OF PURCHASED ITEMS AND SERVICES</u></p> <p>a. Evaluation and selection of sources prior to award of the purchase order. (7.1)</p> <p>b. Qualified personnel survey and evaluate proposed suppliers. QA concurs with the proposed acceptable suppliers list prior to issuing the procurement package for quotations. For major or critical procurements, QA will participate in the entire selection process. (7.2)</p> <p>c. Suppliers are required to submit QA Program documents to show how the QA requirements of the procurement action will be met. Suppliers QA Programs are reviewed and accepted. (7.3)</p> <p>d. Procurement documents define WVNS hold points. (7.4)</p> <p>e. Surveillance at supplier's facilities is planned and conducted during the life of the contract. (7.5)</p> <p>f. Planned receipt inspections are performed and documented to verify conformance to procurement documents. (7.6)</p> <p>g. Upon acceptance of procurement actions by QA, a Quality Release is issued to permit the item to proceed with further processing. Hold or conditional release tags are used by QA for items that have not met all procurement requirements. (7.7)</p> <p>h. Supplier QA documents (C of Cs, etc.) are reviewed by qualified personnel and are maintained in working files. (7.8)</p> <p>i. When commercial grade items are specified verify that A-D of this Par. have been addressed. (7.10)</p>	QAPD-3 Sec.7.0			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
7.1.2.	<p><u>IDENTIFICATION AND CONTROL OF ITEMS</u></p> <p>a. Established the ID and control of samples, materials, parts and components. Provide instructions for the preparation of equipment and material specifications. QA reviews the specification for quality requirements. Identification is maintained and traceable to documents. Verification of ID is required before release. Controls are established to preclude the use of defective items. (8.1)</p> <p>b. After approval of specifications, a procurement package is prepared and reviewed by QA for incorporation of quality requirements. (8.2)</p> <p>c. WVNS specifies the supplier, necessary material controls, heat and lot/batch numbers and associated test, inspection and acceptance reports. (8.3)</p> <p>d. Upon receipt a QA inspector verifies ID and documentation. Acceptable items are released to controlled stores. Items important to safety are listed for the purpose of control and traceability to point of use. (8.4)</p> <p>e. Shelf life of an item is identified. (8.5)</p> <p><u>CONTROL OF SPECIAL PROCESSES</u></p> <p>a. Control of special processes at WVNS as well as at WVNS suppliers. Special processes include welding, NDE, heat treating, canister cleaning, and glass production. Control for processes which specify preparatory steps, special process qualification requirements, processing details, test conditions and documentation requirements for records. (9.1)</p> <p>b. Records required that provide objective evidence that special processes were acceptably accomplished per approved procedures using qualified personnel and equipment. QA verifies that procedures, personnel and equipment, and qualification/control requirements are specified to subcontractors via purchasing documents and specifications. (9.2)</p>	QAPD-3 Section 8.0				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
7.1.3.	<p><u>CONTROL OF SPECIAL PROCESSES</u></p> <p>a. Control of special processes at WVNS as well as at WVNS suppliers. Special processes include welding, NDE, heat treating, canister cleaning, and glass production. Control for processes which specify preparatory steps, special process qualification requirements, processing details, test conditions and documentation requirements for records. (9.1)</p> <p>b. Records required that provide objective evidence that special processes were acceptably accomplished per approved procedures using qualified personnel and equipment. QA verifies that procedures, personnel and equipment, and qualification/control requirements are specified to subcontractors via purchasing documents and specifications. (9.2)</p> <p>c. Provide a system for evaluation of suppliers ability to comply with special process control requirements prior to contract award. (9.3)</p> <p>d. Performing organizations are responsible for criteria establishment to identify and list processes requiring control of special processes. QA monitors special process qualification activities and reviews and approves internal work documents. (9.4)</p> <p>e. QA procedures provide for in-process verification of WVNS work activities for compliance to process control per specified work package. (9.5)</p> <p>f. Characteristics of items, which cannot be readily verified by test or inspection of final product, require process control including documented procedures. (9.6)</p> <p>g. Vitrification operations procedures are reviewed and concurred with by QA. (9.7) Refer to list in QAPD-3</p>	QAPD-3 Section 9.0				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
7.1.4.	<p><u>INSPECTIONS</u></p> <p>a. Classifying items and for identifying quality characteristics to be measured. Inspections are performed according to documented instructions. (10.1)</p> <p>b. Performance of inspections is planned and includes the elements identified in 10.2 of QAPD-3. Inspection plans will identify inspection hold points. The frequency and method of inspections are selected. Inspection instructions and plans are prepared from drawings and specifications by QA. (10.2)</p> <p>c. Inspections are performed by personnel other than those who performed the actual work and are part of the QA organization. (10.3)</p> <p>d. Inspectors are qualified to written procedures. NDE personnel are certified to SNT-TC-1A. Qualifications and certifications are maintained current. (10.4)</p> <p>e. Contractor/supplier inspection programs are evaluated by QA. (10.5)</p> <p>f. Inspections performed are source, receiving, in-process, testing, and process monitoring. Indirect control by process monitoring methods is used. (10.6)</p> <p>g. Nonconformances are documented and processed in accordance with procedures. Reinspections are performed by methods equivalent to the original inspection method. (10.7)</p> <p>h. Mandatory sampling or inspection hold points are controlled to assure that work does not proceed without the authorization of QA. (10.8)</p> <p>i. Inspection and test records contain the elements identified. Refer to QARD-3. (10.9)</p>	QAPD-3 Section 11				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 5 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
7.1.5.	<p><u>TEST CONTROL</u></p> <p>a. Provides for assuring that testing required to demonstrate that processes, items and services conform to the WAPS. Testing personnel are trained and appropriately qualified. Test are performed per written test procedures that identify requirements and acceptance limits. Allowances for uncertainty and error are identified in test plans/procedures. Acceptance criteria includes and delineates precision and accuracy considerations for M&TE. (11.1)</p> <p>b. Includes testing performed in the HLW process qualification and production phases. Includes development and acceptance testing, and testing for product verification. Testing is specified, approved, and controlled through the use of test request, test plans, test matrixes and test procedures. Inspection or hold points by QA or WVPO personnel will be identified in test procedures. (11.2)</p> <p>c. Verification tests shall demonstrate the capability of the computer software program to produce valid results for test problems encompassing the range of permitted usage defined by procedures. (11.3)</p> <p>g. Results are documented and evaluated to assure that test requirements have been satisfied. Organizational responsibilities for test result review and acceptance has been identified. Technical and peer review teams are established for the review, evaluation and acceptance of test data. (11.7)</p> <p>h. Items testes are identified controlled, and ultimately dispositioned. (11.8)</p> <p>i. Test records contain the information described in 10.9 as appropriate. (11.9)</p> <p>d. Test requirements for sampling will include appropriate provisions for collection and maintenance of archival samples. (11.4)</p> <p>e. Acceptance of test results is performed through test reports and test report summaries. Evaluations and approvals by qualified personnel are required. Acceptance criteria shall be provided or approved by the organization responsible for the design. (11.5)</p>	QAPD-3 Section 11			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 6 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
7.1.5. Continued	f. Test procedures have provisions for including prerequisites and for verifying that they have been established and performed. Instrumentation and equipment is specified to satisfy test requirements, including calibration, precision, and accuracy considerations. Environmental conditions are reviewed for adequacy for the test being performed. (11.6)				
7.1.6.	<p><u>CONTROL OF MEASURING AND TEST EQUIPMENT</u></p> <p>a. QA procedures require that all measuring and test equipment be identified and calibrated against certified standards having traceability to nationally recognized standards. Calibration standards shall have equal to or greater accuracy than the equipment being calibrated. If no nationally recognized standard exists, the basis for acceptability of the calibration is required. (12.1)</p> <p>b. Calibrations are performed at prescribed intervals. QA procedures specify required documentation including labeling or tagging. Also required are traceable records of M&TE calibrations. Each organization possessing M&TE is responsible for issuing, approving, and implementing a calibration program. (12.2)</p> <p>c. Implementing procedures require review, evaluation and disposition to verify that equipment and materials accepted or checked with discrepant equipment is evaluated and/or rechecked to verify that no adverse conditions exists. (12.3)</p>	QAPD-3 Section 12.0			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 7 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
7.1.7	<p><u>HANDLING STORAGE AND SHIPPING</u></p> <p>a. Include cleaning, preservation, packaging, handling, shipping, and storage (PPHSS) of waste form production materials and items. Practices and procedures are applied for the control of any necessary archival samples that incorporate the requirements of RW-0214, App. B, Para. 13.1. Procedures are used to prevent damage, loss or deterioration of items and to provide safety to personnel performing quality-related tasks. (13.1)</p> <p>b. Handling, storage, and shipping are performed to established procedures, work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents. (13.2)</p> <p>c. Organizational managers are responsible for the items identified in 13.3 of QARD-3. (13.3)</p> <p>d. QA performs surveillance and audits of the PPHSS program. (13.4)</p>	QAPD-3 Section 13.0				
7.1.8.	<p><u>INSPECTION, TEST, AND OPERATING STATUS</u></p> <p>a. Identification of the status of inspection and test activities on items, or documents traceable to the item. Insure that required tests have been performed. Assure that items which have not passed the required inspections and tests are not inadvertently installed or used. (14.1)</p> <p>b. Address the status of items and require the operating status of facilities be identified, documented, approved and controlled. The status of nonconforming, inoperative, or malfunctioning items is documented to prevent inadvertent use. The organization responsible for this function is identified. (14.2)</p> <p>c. Test and operational status shall be indicated by using tags, stamps, labels, logs, or documentation. Application and removal of status indicators is procedurally controlled. (14.3)</p> <p>d. Incorporates the status of inspection and test activity into procurement documents to assure that the requirements are implemented by suppliers and subcontractors. (14.4)</p> <p>e. The status of equipment readiness to operate will be evaluated by readiness reviews. (14.5)</p>	QAPD-3 Section 14.0				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 8 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
7.1.9	<p><u>CONTROL OF NONCONFORMING ITEMS</u></p> <p>a. Define the measures required to control computer software codes, materials, parts, components or equipment that do not conform to requirements. Describe QA and other organizational responsibilities and authority. (15.1)</p> <p>b. Internal nonconforming items are identified on NRs. Procedure describes measures for identification, documentation, segregation, disposition and notification. QA will incorporate nonconformances into the NR system and will assure acceptable review and disposition. NRs are reviewed and approved by cognizant engineers, using organization and QA. (15.2)</p> <p>c. Assigned individuals or organizations with responsibility for nonconformance disposition shall ensure: (15.3)</p> <p style="margin-left: 40px;">1. Adequate identification and description of nonconformance,</p> <p style="margin-left: 40px;">2. Appropriate action to change existing design documents, test plans or procedures,</p> <p style="margin-left: 40px;">3. Documented approval signatures for authorized disposition.</p> <p>d. Corrective actions are identified to prevent a recurrence of the nonconformance. (15.4)</p> <p>e. Hold tags are affixed to the items identified on the nonconformance. Hold tags are replaced with "accept", "conditional" or "scrap" tags depending on the disposition of the NR. (15.5)</p> <p>f. Suppliers/contractors report nonconformances to WVNS on a (SNR). SNRs will be dispositioned by WVNS with concurrence from WVPO. SNRs are listed on the suppliers final C of C. Procurement packages define the suppliers responsibility relative to SNRs. (15.6)</p> <p>g. QA performs quarterly analysis of nonconformance documents and the results are reported to WVNS upper management for review and assessment. (15.7)</p>	QAPD-3 Section 15.0				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 Of 1	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION - 7 "CONTROL OF PURCHASED ITEMS AND SERVICES - RECEIPT INSPECTION"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager	Date:
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
7.2.1.	Verify that receiving inspection is performed in accordance with established procedures and inspection instructions.	QM-7, Rev. 3 Para. 2.10.3			
7.2.2.	Verify that Quality Engineering us a purchase requisition file for planning receipt inspections and the file contains a copy of the purchase requisitions, supplements and specification requirements for inspection planning and inspection instruction and Data Sheet (IIDS).	QAP 10-2, Rev. 6 Para. 5.1			
7.2.3.	<p>Verify that the Quality Services Inspector performs receipt inspection per IIDS and dispositions materials and items as appropriate for the following conditions.</p> <p><u>a. Acceptable and Conditionally Released Items:</u></p> <ol style="list-style-type: none"> 1. Completes and issues IIDS. 2. Completes and issues a QR. 3. Forwards the C of C/C and other quality related data to Purchasing and Contracts Department. 4. Identify materials and items by fastening an "Accept" or a "Conditional Release" tag. 5. Assure tags reference the QR number. 6. Releases material and items to the warehouse. <p><u>b. Nonconforming Items:</u></p> <ol style="list-style-type: none"> 1. Complete and issue IIDS. 2. Prepare and process a NR per QAP 15-1. 3. Attach a "Hold" tag to the item. 4. Segregate the nonconforming. 	Para. 5.2			

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 7	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION 8 "IDENTIFICATION AND CONTROL OF ITEMS"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/24/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.1.	Verify that items, materials, parts and components fabricated are being identified and controlled and measures have been established to prevent the use of incorrect or defective items or materials.	QM 8, Rev. 3, dated 4/30/90 Para. 1.0				
8.2.2.	Verify that the identification of quality-related materials or items is maintained throughout receiving, fabrication, testing, inspection, assembly, storage, and installation and that the material is traceable to its source when required by applicable codes or design requirements.					
8.2.3	Verify that the cognizant engineering organization has established the following requirements:	Para. 2.1				
a.	Part numbers to be applied to the item(s).					
b.	Identification number or other information to be applied to the items. Markings are required to be transferred to each part of an item when subdivided and are required not to be obliterated or hidden by surface treatment or coatings.					
c.	Shelf life expiration date information to be applied to item(s).					
d.	The means by which the identification number(s) are to be applied to item(s): e.g., ink stamp, etch, or name plate.					
e.	Evaluate and approve items whose shelf life has expired prior to issuance or installation of that item.					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.3. Continued	<p>f. Provisions for the control of item identification consistent with the planned duration and conditions of storage, such as:</p> <ul style="list-style-type: none"> - Maintenance and replacement of markings and identification records due to damage . - Protection of identifications of items subject to excessive deterioration due to environmental exposure. - For updating existing plant records. 	Para. 2.2				
8.2.4.	<p>Verify that cognizant construction, operations, facilities maintenance , warehousing organizations are responsible for the following:</p> <ul style="list-style-type: none"> a. Assuring that the identification of the item is maintained. b. Maintaining shelf life identification of items including spare parts. c. Recommending disposition of expired shelf life items. d. Controlling all quality related weld/braze filler and flux in locked controlled cabinets or rooms and assure proper identification and segregation by size, type, ASME code, and standard, as required by the WVNS Welding Manual. e. Planning and performing maintenance process such that identification is maintained. f. Preventing installation of items whose shelf life has expired. g. Establishing a shelf life/service expiration log or PM schedule and procedure identifying items having limited shelf and/or service life. h. Segregating nonconforming items. 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.5.	Verify that Quality Assurance performs the following: a. Verifies markings are transferred to each part of an identified item when subdivided. b. Assures during inspection, examination, tests, surveillance, and verification, that items are identified, and that the identification conforms to the associated paperwork. c. Assures during inspection, examination, test, surveillance, and verification, that items whose shelf life expiration date has passed are not installed unless evaluated and approved.	Para. 2.3				
8.2.6.	Verify that QA Personnel provide surveillance of ongoing activities related to Quality Level "A", "B" OR "C" activities to verify that items have been identified to the extent specified.	QAP 8-1, Para. 4.1				
8.2.7.	Verify that Quality Services Inspectors: a. Assure, during inspection, examination, test, and test verification, that items are identified and that items, that whose shelf life expiration date has passed are not installed unless an evaluation and appropriate approval by the cognizant project engineer is received. b. Perform warehouse inspection and appraisal to assure that items whose shelf life expiration dates have occurred are identified as nonconforming and to verify that the identification and quantity of items in warehouse stores plus the quantity of items released from the warehouse is the total number released on the Quality Release Form. c. Assure that inspection, examination, test, and test verification records are identified so as to be directly correlative to the items which they represent. d. Perform receiving inspection of quality related items and the related supplier documentation and segregate nonconforming items. (Refer to C/L for QAP 10)	QAP 8-1, Para. 5.1 Para. 5.1.1 & 5.1.2 Para. 5.1.3 & 5.1.4 Para. 5.1.5 Para. 5.1.6				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 82EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.8	Verify that deficiencies are noted and documented in accordance with QAP 15-1. NOTE: This procedure, QAP 8-1 does not capture any Quality Records to substantiate compliance.	Para. 4.2				
8.2.9.	Verify that PR/PRS/POR are completed by the requisitioner and include applicable information (refer to Attachment B).	WV 620, Rev. 10, dated 2-28-92 Para. 6.0A 10.				
8.2.10	Verify the PR/PRS/POR has been routed to the appropriate organizations for approval as identified in 6.0.B.1-9.	Para. 6.0.B				
8.2.11.	Verify that for quality level A, B, or C that PR/PRS/POR are reviewed by Quality Assurance to ensure that quality requirements are clearly and adequately stated. Verify review by signature of document and retention of copy by QA.	Para. 6.0.C				
8.2.12.	Verify that the requisitioner has obtained Quality Assurance and/or Radiation and Safety, and other internal concurrences that may be required. NOTE: Verify the "Potentially Harmful Substance Procurement Checklist" from WV-1139 is completed as applicable.	Para. 6.0.E				
8.2.13.	Verify that required signatures are obtained.	Para 6.0 F-H				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.14.	Verify that the Cognizant Systems Engineer has obtained the WVNS equipment and valve numbers from the Work Control Center.	EP-8-001, Rev.2 Dated 6/24/82 Para. 4.1				
8.2.15.	Verify that the equipment and valve numbers have been included in the design documents and drawings and also placed on the items per SOP-00-30.	Para. 4.2				
8.2.16.	Verify that changes to numbers and technical data in engineering released documents have been made by Engineering Change Notices.	Para. 4.3				
8.2.17.	Verify that numbers are formatted/designated as specified in the attachments A, B, C, & D of EP-8-001.	Para 4.4, 4.5, 4.6, 4.7, 4.8, 4.9				
8.2.18.	Verify that the Valve & Specialty List (VSL) is the controlling document for procurement and construction packages. Note: Have the auditee demonstrate how the VSL is controlled.	Para. 4.11				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 6 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.19.	Verify that J-13 or J-14 forms are filled out when requesting numbers for individual pieces of equipment.	Para. 5.0				
8.2.20.	Verify that the Cognizant System Engineering Manager controls the block of numbers in his department and prior to turnover to Operations all numbers not used are returned to WCC.					
8.2.21	Verify that a J-5 and/or J-5 Form has been completed equipment as well as an approved engineering released valve list included (SOP 00-3).	Para. 5.0				
8.2.22.	Verify the following are performed by the responsible designee: a: Cognizant Systems Design Manager 1. Assure subcontractors design drawings include WVNS numbers 2. Assure items have been assigned a WVNS number 3. Assure the item number are included in design documents and drawings					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 7 Of 7	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
8.2.22 Continued	<p>b. Cognizant System Engineer (CSE)</p> <ol style="list-style-type: none"> 1. Submits the J-13 or J-14 forms to the Work Control Center (WCC). 2. Numbers all the items under his cognizance . 3. Reviews subcontractors design drawings to assure items have been assigned WVNS numbers 4. Assures numbers are in design documents; drawings and or item. 5. Prior to Engineering turnover to Operations the J-4 and/or J-5 forms. <p>c. Work Control Center (WCC)</p> <ol style="list-style-type: none"> 1. Enters approved data into SENS Database including changes form ECNS. 2. Issues the equipment or valve number. 3. Updates the equipment and valve numbering Database 4. Provides Equipment and valve lists reports. 					

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 4	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION 9 "CONTROL OF PROCESSES"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program manager	Date: 7/24/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
9.2.1.	<p>Verify that the following special processes are being performed by qualified personnel using qualified procedures in accordance with specified requirements.</p> <ul style="list-style-type: none"> a. HLW slurry feed production, b. canistered glass production, c. canistered closure, d. canistered decontamination, e. canister transfer and storage, f. welding, g. brazing, h. soldering, i. heat treatment, j. coating, k. nondestructive examination, l. special cleaning. <p>NOTE: Has any other special processes been identified by design requirements as being special processes?</p>	QM-9, Rev. 6 dated 12/11/91 Para. 1				
9.2.2.	Verify that satisfactory evidence of HLW special process activities has been specified in the Waste Qualification Report (WQR).					
9.2.3.	<p>Verify that personnel performing special processes have been qualified as follows;</p> <ul style="list-style-type: none"> a. Personnel except inspection and test (NQA-1-89 S-2S-1 Excluding Paras. 2.7 and 2.8). b. Inspection and test personnel (NQA-1-89 S-2S-1 & App. 2A-1). 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
9.2.4.	Verify that process control procedures specify: <ul style="list-style-type: none"> a. preparatory steps, b. processing details, c. test conditions, d. records requirements. 					
9.2.5.	Verify that QA personnel approve use of special processes Work Orders for fabrication, assembly or repair of items at WVNS facilities.	QAP 9-1. Rev. 2, dated 6/11/91 Para. 5.1.1				
9.2.6.	Verify that the Quality Engineer approves special processes which are specified on drawings, specifications, or instructions during procurement package review.	Para. 5.1.2				
9.2.7.	Verify that QA personnel participate in the preparation, qualification, implementation, controlling and documenting of special processes used by WVNS.	Para. 5.1.3				
9.2.8.	Verify that QA personnel identify, perform, and document the special process verification surveillance activities in accordance with QAP 10-3.	Para. 5.1.4				
9.2.9.	Verify that QA personnel verify that records (procedures, qualifications, instructions, results, etc.) are maintained when performed by WVNS.	Para. 5.1.5				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVNS NDE Process Control</u>					
9.2.10.	Verify that quality assurance personnel are qualified and certified in accordance with WVNS Written Practice, WP-001, current revision.	QAP 9-2, Rev. 3, dated 8/11/92 Para. 5.1 Para. 5.1.1				
9.2.11.	Verify that NDE procedures have been developed by QA level II NDE personnel and have been reviewed and approved by a certified Level III designated by the WVNS President.	Para. 5.1.2 & 5.1.3				
9.2.12.	Verify that NDE procedures are assigned a unique number, are controlled and the exact procedure number and revision used shall be reflected on the work document.	Para. 5.1.4				
9.2.13.	Verify that the QA organization maintains file copies of approved WVNS procedures until superseded or revised.	Para. 5.1.5				
9.2.14.	Verify that NDE examinations on "code" and "non-code" are recorded appropriately.	Para. 5.1.6 & 5.1.7				
	<u>WVNS Subcontractor NDE Process Controls</u>	Para. 5.2				
9.2.15.	Verify that QA Level II NDE personnel reviews subcontractors submitted procedures, personnel qualification reports and NDE to meet WVNS specification requirements. Who within WVNS approves or accepts Subcontractors NDE procedures?	Para. 5.2.1				
	<u>RECORDS</u>	Para. 5.3				
9.2.16.	Verify the following:					
	a. IDS for Code Items are traceable to the work document number,	Para. 5.3.1				
	b. Other NDE results are recorded on the work document which is handled per implementing procedure,	Para. 5.3.2				
	c. Subcontractor records are maintained per contract.	Para. 5.3.3				

Quality Assurance Audit Checklist (Continuation Sheet)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
9.2.17.	Verify that QA representatives identify hold point verification activities in accordance with QAP 7-3.	QAP 9-3, Rev. 2, dated 6/11/91 Para. 5.1.1				
9.2.18.	Verify that QA representatives plan and conduct surveillance of welding processes to verify compliance with applicable Surveillance and Source Inspection Plans (SSIPs),(QAP 7-4).	Para. 5.2.1				
9.2.19.	Verify activities evaluated were those contained in Attachment A, "Welding Process Surveillance Guide".	Para. 5.2.2				
9.2.20.	Verify that the results of welding surveillance has been documented on the Surveillance Report form as outlined in QAP 10-3.	Para. 5.2.3				
9.2.21.	Verify that nonconformances detected during surveillance are documented per QAP 15-1 and the NR number is referenced on the surveillance report.	Para. 5.2.5 & 5.2.5				

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 Of 5	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION 10 "INSPECTIONS"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
10.2.1.	<p>Verify that the cognizant QAR has prepared the appropriate planning document in accordance with the applicable procedure as indicated below;</p> <p>a. IIDS and QIP per QAP 10-1'</p> <p>b. CIP per QAP 10-4</p> <p>Note: These attributes will be verified during audit of specific activities/procedures.</p>	<p>QAP 2-5, Rev. 2, dated 6/11/92</p> <p>Para. 5.1.1</p>			
10.2.2.	<p>Verify that the QAR reviews the specifications and/or purchase documents and identifies quality affecting activities such as;</p> <p>a. The establishment of interfaces with suppliers quality organization,</p> <p>b. Identification of Hold and Witness points,</p> <p>c. Identification of any special test and inspection requirements,</p> <p>d. Identification of quality record requirement,</p> <p>e. Evaluation of supplier quality program performance,</p> <p>f. Receipt inspection requirements,</p> <p>g. Surveillance activities to be conducted at the suppliers' facility,</p> <p>h. Identification of organizations or personnel responsible for each planned activity,</p> <p>i. Identification of personnel qualifications for planned inspections or tests.</p>	<p>Para. 5.2 and 5.2.1 & 5.2.9</p>			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
10.2.3.	Verify that planning for inspections has been accomplished and documented and the documentation identifies the characteristics, methods, and acceptance criteria and provides for recording objective evidence of inspection results.	QM-10 Rev. 6, dated 12/11/91 Para. 2.1.1				
10.2.4.	Verify that inspections of items in-process or under construction are performed for work activities where necessary to verify quality.	Para. 2.1.2				
10.2.5.	Verify that mandatory hold points have been indicated in appropriate documents and consent to waive a hold point has been recorded prior to continuation of work beyond the designated hold point.	Para. 2.1.3				
10.2.6.	Verify that indirect control by monitoring has been provided for if inspection of processed items is impossible or disadvantageous. Also, both inspection and process monitoring are provided when control is inadequate without both.	Para. 2.1.4 2.1.5				
10.2.7.	Verify that when combined inspection and process methods are required, controls are established and documented for the coordination and sequencing of these activities at established inspection points during successive stages of the conducted process or construction.	Para. 2.2.2				
10.2.8.	Verify that final inspections include a records review of the results and resolution of the nonconformances identified by prior inspections.	Para. 2.3.1				
10.2.9.	Verify that completed items are inspected for completeness, markings, calibration, adjustments, protection from damage, or other characteristics as required to verify the quality and conformance of the item to specified requirements.	Para. 2.4.1				
10.2.10.	Verify that quality records are examined for adequacy and completeness if not previously so examined.	Para. 2.4.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
10.2.11.	Verify that the acceptance of the item has been documented and approved by authorized.	Para. 2.5				
10.2.12.	Verify that reinspections are performed on items that were modified , repaired, or replaced subsequent to the final inspection.	Para. 2.6				
10.2.13.	Verify that inservice inspection or surveillance is planned and executed by or for the organization responsible for operations.	Para. 2.7.1				
10.2.14.	Verify that inspection methods have been established and executed to verify that characteristics of an item continue to remain within specified limits.	Para. 2.8.1				
10.2.15.	Verify that inspection methods include evaluations of performance capability of essential emergency and safety systems and equipment, verification of calibration and integrity of instruments and instrument systems, and verification of maintenance.	Para. 2.8.2				
10.2.16.	Verify that inspection records identify as a minimum; <ul style="list-style-type: none"> a. Item inspected, b. Date of inspection, c. Inspector, including any required expertise, d. Inspection procedure, A.-D. type of observation, e. Characteristics inspected and identification of acceptance criteria, f. Identification of any specific equipment used during inspection, g. Results of acceptability, h. Reference to information on action taken in connection with nonconformances. 	Para. 2.9.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 4 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
10.2.17.	Verify that QA employs QIPs for inspection and tests to be performed in detail when the use of the IIDS is considered insufficient by the Quality Engineer.	QAP 10-1, Rev. 4 dated 6/11/91 Para. 5.1.1			
		Para. 5.1.2.A			
10.2.18.	Verify that when QIPs are used they are prepared per Attachment A.	Para. 5.2.1.B			
		Para. 5.2.1.C			
10.2.19.	Verify that QA assigns an identification number to the QIP.				
10.2.20.	Verify that QA distributes QIPs as follows:				
	a. Originator	Para. 5.1.2			
	b. Engineer				
	c. Quality Assurance Files (confirm index)				
	d. Data sheets are attached to QIPs.	Para. 5.1.3			
10.2.21.	Verify that inspection instructions are prepared by QEs.				
10.2.22.	Verify that QA employs CIPs per the Construction Inspection Program plan (CIPP) for the Title III inspection/verification program.				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
10.2.23.	Verify the Title III Planner determines the degree of inspection and verification required based on the following factors: a. Review of inspection requirements, b. Quality Assurance classification c. Subcontractor has independent inspection organization, d. Subcontractor's system for reporting inspection results, e. Experience history with subcontractor.	QAP 10-4, Rev. 4 dated 6/11/91 Para. 5.1				
10.2.24.	Verify the Title III Planner develops the CIP, per Attachment A, and it includes the following, as a minimum: a. Identification of specifications and drawings, b. Points at which inspections/tests/verification are required, c. Hold, Witness and inspection points, d. Certifications required, e. Refer to Table I for typical inspections and testing.	Para. 5.2				
10.2.25.	Verify that the CIPs are approved by the Quality Assurance Management.	Para. 5.2				
10.2.26.	Verify that Quality Assurance maintains the documents listed in 5.3.1 to 5.5.12.	Para. 5.3				
10.2.27.	Verify that information copies generated by others organizations are maintained by QA; a. Supplier Nonconformance reports b. Inspection/Test reports	Para. 5.4				

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 9	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION - 11 "TEST CONTROL"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/24/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.1.	Has construction turnover or WVNS acceptance of structures, systems, or components occurred in order to start the testing and startup phase.	EP-11-001, Rev.3 Dated 7/29/89 Para. 4.1				
11.2.2.	Verify that compliance documentation, showing compliance with the construction specification has been provided to the Startup System Shift Manager (SSM)					
11.2.3.	Verify that items not completed, at turnover have been identified on an open items list as "Plant Deficiencies."					
11.2.4.	Verify that the Cognizant System Design Manager (CSDM) has identified what is required to verify compliance on all Plant Deficiencies.					
11.2.5.	Verify that Vendor Compliance Documentation has been identified and the location provided to the SSM. Also verify that any open items on the equipment have been identified and all concerned parties agree.	Para. 4.2				
11.2.6.	Verify that the CSDM has identified what is required to verify compliance on all open items.					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.7.	Verify that Test Plans (TPL) identify structures, systems, subsystems, and compliance that must be tested.	Para. 4.3				
11.2.8.	Verify that TPLs provide a brief, concise description of the purpose of each test and the acceptance criteria.					
11.2.9.	Verify that a matrix has been prepared which identifies: <ul style="list-style-type: none"> a. The item to be tested b. The SIPs used for testing c. The TOPs used in cold ops testing d. The SOPs for hot operations e. Complete TRR number (Att. A). 					
11.2.10.	Verify that acceptance testing is performed in accordance with applicable SIPs.	Para. 4.4				
11.2.11.	Verify that SIPs are when used as test procedures, the format in att. B is used as a guide to assure consistency. Note: Ask when would a SIP not be used.					
11.2.12.	Verify that Cold Ops Testing is conducted in accordance with applicable TOPs, SOPs, and SIPs. Note: SIPs will be the controlling documents, TOPs and SOPs will be used to actually run the test.	Para 4.5				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.13.	Verify that all system deficiencies discovered during the testing or startup phase will be reported on Test Exceptions (TE).	Para. 4.6				
11.2.14.	Verify that Test Data Sheets (TDS) have been approved by the SSM and Transmit the Test Data (TD) package to Facilities Document Control (FDC).	Para. 4.7				
11.2.15.	Verify copies have been provided to the Master Record Center (MRC).					
11.2.16.	Verify that upon approval of the TD package the SSM has a Test Results Report (TRR) and the required approval attained by: <ul style="list-style-type: none"> a. Cognizant Systems Design Manager (CSDM) b. Startup System Shift Manager (SSM) c. Quality Assurance Manager (QM) d. Operations Manager (OM) 	Para. 4.8				
11.2.17.	Verify that the SSM conducts an interactive or non-interactive review of the TRR per the TPL and the interactive review will be documented per Test Results Report Review Team Report (TRRT).					
11.2.18.	Verify that TPLs and TRRs are controlled. Refer this attribute to Team "A"	Para. 4.9				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.19.	<p>Verify that systems have been put in standby status and are being maintained after:</p> <ul style="list-style-type: none"> a. Completion of Cold Ops system test b. Completion of the TRR c. The system has been returned to normal operating status 	Para. 4.10				
11.2.20.	<p>Verify that the CSDM provides maintenance requirements for the equipment and forwards them to facilities.</p>					
11.2.21.	<p>Verify that systems have been turned over to facilities when determined ready by the SSM, CSDM, and QA. Refer to SOP-003.</p>	Para. 4.11				
11.2.22.	<p>Verify that Test Requests describing the test and associated requirements are prepared (per att. B) by the requesting organization.</p>	EP-11-003, Rev. 4 Dated 8/4/81 Para.4.1				
11.2.23.	<p>Verify that TR is approved by both the requesting and performing group (WVNS) personnel as follows:</p> <ul style="list-style-type: none"> a. Quality Assurance b. Radiation & Safety 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.24.	<p>Verify that additional approvals are required based on the Quality Level of the activity.</p> <p style="margin-left: 40px;">Note: How is it determined when additional approvals are required.</p>	Para. 4.2				
11.2.25.	<p>Verify that test procedures have been prepared by the requesting organization and they contain adequate detail and define test prerequisites and procedures. (Refer to Attachment C for procedure format.)</p>					
11.2.26.	<p>Verify that test procedure approvals have been obtained from both the requesting and performing groups;</p> <p style="margin-left: 40px;">a. Quality Assurance b. Radiation and Safety</p> <p style="margin-left: 40px;">Note: How is it determined that additional approvals are required.</p>					
11.2.27.	<p>Verify that test performers have reviewed or been briefed on test request and test procedures before working on the test and have been documented per the instructions of the test procedure.</p>	Para. 4.3.1				
11.2.28.	<p>Verify that test performance does not commence until the test request and associated test procedures are approved and Engineering released and prerequisites completed.</p>					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 6 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.29.	Verify that release to start testing is done by Work Order and documented in the Test Log.					
11.2.30.	Verify that Test Log entries are used to record significant events to the test performance.	Para. 4.3.2				
11.2.31.	Verify that Test Log entries include the requirements of Paragraph 4.3.2 to 4.3.2.3.	Para. 4.3.2				
11.2.32.	Verify that appropriate engineers/scientists have reviewed test data during the progress of testing and notations of these reviews have been recorded in the Test Log.	Para. 4.3.3				
11.2.33.	Verify that Test Logs have been reviewed by the assigned test performers, supervisors, and the requesting group and so noted.					
11.2.33.	Verify that Test Logs have been reviewed by the assigned test performers, supervisors, and the requesting group and so noted.					
11.2.34.	Verify that test facility modifications required during a test have been documented by Work Orders and/or test exceptions and noted in the Test Log.	Para. 4.3.3.A				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 7 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.35.	Verify that Test Requests and/or Test Procedures are modified to reflect changes in technical scope and schedule.	Para. 4.3.3.B				
11.2.36.	Verify that procedure changes that are essential to the successful completion of the test are being controlled by Test Exceptions.					
11.2.37.	Verify that changes to Test Requests are approved by the performing organization and/or by the Cognizant Quality Engineer and Cognizant Engineer from the requesting organization.					
11.2.38.	Verify that a copy of the approved and completed Test Exceptions have been delivered to Records Management.					
11.2.39.	Verify that Test Exceptions have been forwarded or distributed to: <ul style="list-style-type: none"> a. Work Copy (so denoted) <ul style="list-style-type: none"> 1. Work Group Supervisor 2. originator 3. Text Exception Authority 4. Managers of requesting and performing group 5. Cognizant engineers/scientists who prepared the Test Request and the Test Procedure. 6. Quality Assurance 7. Safety 8. Operational Planning 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 8 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.40.	Verify that all Test Exceptions have been completed denoting conclusion of test.	Para. 4.4				
11.2.41.	Verify that Engineering Change Notices have been prepared for the Test Exception File of specific test and the Change Notices have been approved per EP-3-007.					
11.2.42.	Verify that when testing is complete, the performing group prepares an Initial Test Summary (ITS) when specified in the Test Request.					
11.2.43.	Verify that the Cognizant Quality Engineer reviews: <ul style="list-style-type: none"> a. Completed Test Procedure b. Associated Data Sheets c. Test Log d. Sample Log (when used) NOTE: This review shall be noted in the letter transmitting test records to the Master Record Center.					
11.2.44.	Verify that Test Summary Report has been prepared and is understandable to qualified independent reviewers and the Test Summary Report has been approved by both the requesting and performing group's Managers and Quality Assurance.					

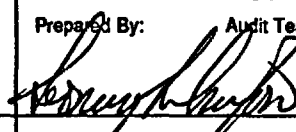
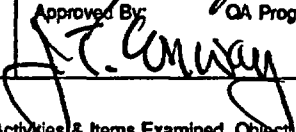
Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 9 Of 9	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
11.2.45.	<p>Verify that test records are processed per QAP 17-1. The following records are considered QA Records.</p> <ul style="list-style-type: none"> a. Test Requests b. Test Procedure c. Test Exception d. Test Data Sheets e. Test Log f. ECNs g. Exception File h. Sample Log i. Transmittal Letter to MRC j. Initial Test Summary k. Test Summary Report l. Experimental and Test Development Acceptance Sheet 					

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 4	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION 12 "CONTROL OF MEASURING AND TEST EQUIPMENT"		Prepared By: 	Date: 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: 	Date: 7/24/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
12.2.1.	Verify that each organization possessing M&TE has established, approved, issued, and implemented a calibration program that includes the provisions of Attachment A.	QM-12, Rev. 5, dated 12/11/91 Para. 2.1				
12.2.2.	Verify that users of equipment return M&TE for periodic recheck and/or calibration if damaged, malfunction or out-of-calibration is suspected.	Para. 2.2				
12.2.3.	Verify that Quality assurance has; <ul style="list-style-type: none"> a. Reviewed and approved procurement packages for adequacy of control of M&TE, b. Reviewed and approved calibration procedures, c. Performed surveillance and audits for procedural compliance. 	Para. 2.3 and 2.3.1 to 2.3.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
12.2.4.	Verify that upon receipt of new equipment Quality Services (QS) assigns a WVNS M&TE number and the number is marked on each instrument in a permanent fashion and is easily visible.	QAP 12-1, Rev. 4, dated 6/11/91 Para. 5.1				
12.2.5.	Verify that QS maintains a master M&TE ID log to document the assignment of unique ID numbers to M&TE assigned to QA.	Para. 5.2.1				
12.2.6.	Verify that upon receipt of new equipment QS completes; a. Equipment Inspection Record Card-"EIRC" (Attach. C) b. Instrument Data Card-"IDS" (Attach. B) c. Log sheet for M&TE Log book (Attach. E)	Para. 5.2.2				
12.2.7.	Verify that QS has filled out and forwarded to Work Control Center form J9 "IDS" and J10 "Calibration Data Sheet" per WV-109.	Para. 5.2.3				
12.2.8.	Verify that QS maintains the M&TE log book that contains one or more pages of (Attach. E) for each piece of equipment indicating each time the equipment is used and by whom.	Para. 5.2.4				
12.2.9.	Verify that completed log books have been transmitted to the Master Record Center per WV-730.	Para. 5.2.5				
12.2.10.	Verify that QA has established a calibration frequency schedule from the guidelines in Attach.	Para. 5.3.1				

Quality Assurance Audit Checklist

(Continuation Page)


Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
12.2.11.	Verify that the Instrument Shop uses primary standards having tolerances of one-fourth to one-tenth those of the equipment being calibrated. Verify that primary standards are in calibration.	Para. 5.4.1				
12.2.12.	Verify that calibration data has as-found condition and condition after adjustment recorded on the calibration work sheet for each affected instrument including calibration data and next due date.	Para. 5.4.2				
12.2.13.	Verify that the Instrument Shop replaces the old calibration sticker with a new one, properly filled out (Attach. D) and the sticker is attached to the instrument or the casing, as appropriate.	Para. 5.4.3				
12.2.14.	Verify that the Instrument Shop has filled out and forwarded the appropriate forms to the Work Control Center per WV-109.	Para. 5.4.4				
12.2.15.	<p>Verify that when M&TE is calibrated by WVNS vendors, the purchase orders show one line item for;</p> <ul style="list-style-type: none"> a. Vendor has approved calibration procedures used by qualified people, b. Information provided contains the WVNS equipment serial number, c. Vendor provides calibration data sheets for as-found data, including out of calibration conditions, d. Vendor provides notation of any repairs, e. Vendor provides post calibration data, f. Vendor provides certificate of calibration with the specified information noted. g. Vendor to affix calibration sticker containing the specified information. 	Para. 5.5.1 (A-G)				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
12.2.16.	Verify that receiving inspection is performed on all M&TE when returned from the vendor per QAP 10-2.	Para. 5.5.2				
12.2.17.	Verify that upon receipt by QA, the proper forms are completed and forwarded to the Work Control Center per WV-109.	Para. 5.5.3				
12.2.18.	Verify that the provisions for special calibration, in this section, have been complied with.	Para. 5.6.1 to 5.6.6				
12.2.19.	Verify that when a standard is identified as being out-of-calibration, that a list of deviations from tolerance are compiled and the QS Manager assures that: <ul style="list-style-type: none"> a. All instruments calibrated with that standard are identified, b. The degree and affect of the error is evaluated, c. Nonconformances will be initiated if warranted. 	Para. 5.7.1				
12.2.20.	Verify that when equipment becomes inactive that the Instrument Shop; <ul style="list-style-type: none"> a. Marks appropriate records "inactive" with date, b. Affix a "Hold" tag to the equipment c. Notify the owner of the instrument, d. Complete and forward the appropriate forms to the Work control Center per WV-109. 	Para. 5.8.1 to 5.8.4				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 4	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION 13 "HANDLING, STORAGE, AND SHIPPING"		Prepared By:  Audit Team Leader		Date: 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager		Date:
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
13.2.1.	Verify if any High Level Radioactive Waste has been shipped.					
13.2.2.	Verify that WVNS has performed oversight activities.					
13.2.3.	Verify that preservation, packaging, handling, shipping, and storage (PPHSS) of materials and equipment which are purchased, fabricated, shipped, or stored by WVNS shall be controlled to prevent damage, loss, or deterioration and to provide adequate safety of personnel.	QM-13, Rev. 4 Para. 1.0				
13.2.4.	Determine what items the plant Manager is responsible for handling, shipping and storing. Also determine what work and inspection instructions, drawings, specifications, shipment instructions or other pertinent documents or procedures specified for use in conducting the activity.	QM-13, Rev. 4 Para. 2.1				
13.2.5	Verify how the Department Manager is: <ul style="list-style-type: none"> a. Incorporating any PHSS requirements into design, procurements, contractual, and instructional. b. preparing and approving procedures for critical lifts, fuel components, handling operations, and other high level or critical items, as applicable. c. preparing procedures for inspections and testing special tools and equipment/ d. Identifying requirements for training operators for special handling and equipment. 					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
13.2.6	<u>Lifting and Rigging</u> Verify that the Quality Assurance representative is: <ul style="list-style-type: none"> a. Reviewing and approving lift Procedures, Assigning hold, witness, or verification points. b. Establishing required inspections for rigging prior to and after load testing and approving load testing methods and procedures. Note: Determine how and what the necessary qualifications are for the Quality Assurance representative. d. Providing general surveillance of load testing activities and performing non-destructive examinations (NDE) inspections as required. 	QAP 13-1, Rev. 1 Dated 3/29/92 Para. 5.1 A-G				
13.2.7	<u>Off-site Shipments</u> <ul style="list-style-type: none"> a. Determine if hazardous are being or have been shipped off-site. b. Verify that general inspection of hazards material shipments are being conducted in accordance with approved procedures and the appropriate forms are being used (att. B and C) c. Verify that a log is being maintained and is up to date. 	Para. 5.2				

Quality Assurance Audit Checklist

(Continuation Page)

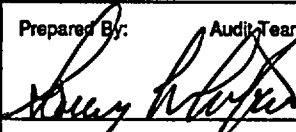
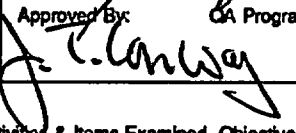
Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
13.2.8	<p>Verify that the Materials Safety Data Sheets (MSDSs), analytical results, SOPs attachments, and other supporting documentation substantiates the classification of 49CFR172 Subpart B.</p> <p style="margin-left: 40px;">Note: Review Section A of Attachment B of this procedure.</p>	Para. 5.3				
13.2.9	<p><u>Packaging</u></p> <p>Verify that inspections for the overall integrity of the container is documented and inspections which indicate conditions which could result in breakage or leakage.</p> <p style="margin-left: 40px;">Note: Review Section B of Attachment B of this procedure.</p>	Para. 5.4				
13.2.10	<p>Verify that each container is packed properly and documentation is available which contains the following:</p> <ul style="list-style-type: none"> a. Proper shipping name b. UN/NA shipping name c. Name and address of the Consignor, Consignee, or both d. Labels indicating "This End UP" or "This Side Up" 	Para. 5.5				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 4	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
13.2.11	Verify that proper labeling is placed on the surface of the package or container.	Para. 5.6 & 5.7				
13.2.12	Verify that Shipping Papers/Manifests contain the following: <ul style="list-style-type: none"> a. Proper shipping name b. Correct hazard class c. Correct UN/NA number d. Items a through c in sequence 	Para. 5.8				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 5	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION - 14 "Review of Inspection, Test, and Operating Status"		Prepared By:  Audit Team Leader	Date: 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By:  QA Program Manager	Date: 7/29/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>PROCEDURAL ADEQUACY</u>					
14.2.1.	<p>Does the appropriate procedure address the following: (verify as appropriate)</p> <p>a. The status of inspected items and the operating status of facilities shall be visible and controlled. Quality status indicators shall be removed only by, and with the approval of, the organization that applied them.</p> <p>b. The inspection and test status of individual quality related items shall be identified by tags, stamps, labels, or other suitable documentation.</p> <p>c. The operational status of quality related structures, systems, and components shall be indicated by utilizing tagged valves, tagged switches, lockouts, etc., in conjunction with log book entries that document status to prevent unauthorized adjustment or operation.</p> <p>d. The operating or process status of quality related systems shall be controlled.</p> <p>e. Altering the required tests, inspections, and other operations shall be controlled by review and approval by the organizations that performed the original test, inspection, or operational procedure review and approval.</p>	QM 14, Rev. 4, Sec. 2.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>RESPONSIBILITIES:</u>					
14.2.2.	What methods does the system engineer adopt to implement the approved procedures for a facility status control system for quality related items?	QM 14, Rev. 4, Sec. 2.1				
14.2.3.	How are the inspection and test status of quality related items identified and controlled?					
14.2.4.	Review and verify that the QA department personnel perform the following: a. Review and approve the "Inspection, Test, and Operating Status" procedure(s). b. Perform audits and surveillance for procedural compliance. c. Verify that subcontractors, authorized to fabricate, install, and/or test items, have an adequate inspection test-status system.	QA 14, Rev. 4, Sec. 2.2				
14.2.5.	Review and verify the appropriate Procurement, Contractual, and Instructional documents that include a statement or address the requirements for the status of inspection and test activities.	QM 14, Rev. 4, Sec. 2.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
14.2.6.	How does the engineering or construction organization ensure that the regional tests or inspections have been performed and the status is as indicated?	QM 14, Rev. 4, Sec. 2.3				
14.2.7.	Review and verify the objective evidences of implementation of this procedure for the facility status control system of the quality related items.	QAP 14-1, Rev. 3 Sec. 3.1				
14.2.8.	Review the Quality Assurance Review and Verification Program (e.g. E&A schedule)	QAP 14-1, Rev. 3 Sec. 3.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
14.2.9.	<p><u>VERIFY THE FOLLOWING:</u></p> <p>QA Personnel shall:</p> <ul style="list-style-type: none"> a. Perform verification surveillance, inspection, and/or test activities for test status or operating status. b. Verify that work status is maintained through indicators such as tags, markings, shop travellers, stamps, inspection records, or other suitable means. c. Verify valves and switches are tagged as indicated. d. Sample locked valves for accuracy with lock and tag log book to verify system lineup. e. Perform inspections and/or surveillance to verify traceability of materials. f. Affix inspection "Accept" or "Hold" tags to items as appropriate to control the operability/status of items. g. Review log books to verify timely record keeping of status changes. 	<p>QAP 14.1, Rev. 3 Sec. 5.1</p>				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
14.2.10.	<p><u>STATUS CONTROL:</u></p> <p>Review and verify that the following guidelines are used, as a minimum, when performing a surveillance of inspection, test, and operating status:</p> <ul style="list-style-type: none"> a. Review log books to verify location or status of tags and equipment. b. Verify sample valves are properly aligned. c. Verify locations of lock out or caution tags are those stated in the corresponding log books. d. Verify physical positions of tagged valves. e. Verify calibration stickers are affixed to calibrated items (e.g., pressure gauges). f. Verify calibration status is current. g. Verify through log books and tags that DOP test status is current. h. Verify Load Test is current, tags are present, and weight limits are not exceeded on all hoisting and rigging equipment and accessories. 					

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 Of 8	
Organization Evaluated: WVPO & WVNS		Audit Subject: CRITERION - 15 "Nonconformance"		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager	Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
15.2.1.	<p>Verify that the control of nonconforming items is as follows:</p> <p>A. Identification (ID)</p> <ol style="list-style-type: none"> ID of nonconforming items is by marking, tagging, or other suitable means. ID is legible and recognizable. If ID of item is not practical, the container, package, or storage area is identified. <p>B. Segregation</p> <ol style="list-style-type: none"> Nonconforming items will be segregated. <p>C. Disposition</p> <ol style="list-style-type: none"> Nonconforming characteristics are reviewed, and recommended dispositions are proposed and approved. Further processing, delivery, installation, or use of non-conforming items are controlled. 	<p>QM-15, Rev. 5, dated 12-11-91, Para. 2.0</p> <p>Para. 2.1</p> <p>Para. 2.2</p> <p>Para. 2.3</p>			
15.2.2.	<p>Verify the responsibility and authority for the evaluation and disposition of nonconforming items has been defined.</p>	Para. 2.3.2			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.3.	Verify that personnel performing evaluations to determine disposition have demonstrated competence in the area being evaluated, understand the requirements and have access to background information.	Para. 2.3.2				
15.2.4.	Verify that dispositions are identified and documented, i.e. USE-AS-IS, Repair, Reject, or Rework.	Para. 2.3.4				
15.2.5.	Verify that repaired or reworked items have been re-examined using the original acceptance criteria.	Para. 2.3.5				
15.2.6.	Verify that nonconforming items are documented on a "Nonconformance Report" (WV-1202).	QAP 15-1, Rev. 6, dated 1-30-82, Para. 5.1				
15.2.7.	Verify a copy is retained in the QA file and the original NR to the cognizant engineer.	Para. 5.2				
15.2.8.	Verify that nonconforming items are identified with a red hold tag or some other appropriate manner.	Para. 5.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.9.	Verify that nonconforming items are segregated in a manner that precludes inadvertent use.	Para.				
15.2.10.	Verify that nonconforming characteristics are reviewed, dispositioned, and approved by the cognizant engineer, cognizant manager, and cognizant Quality Engineer.	Para. 5.5				
15.2.11.	Verify that technical justification for "Use-As-Is" or "repair" disposition is provided.	Para. 5.6				
15.2.12.	Verify that "Use-As-Is" and "repair" are subject to the original design control measures and will be reexamined in accordance with the original acceptance criteria unless otherwise specified in the disposition.	Para. 5.7 and 5.8				
15.2.13.	Verify that the Quality Engineer: <ul style="list-style-type: none"> a. Evaluates the disposition, cause, and technical justification and concurs. b. Obtains the DOE-WVPO review and disposition. 	Para. 5.9				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 4 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.14.	Verify that the QA Representative: <ul style="list-style-type: none"> a. Gets an NR number from QADCC. b. Completes the NR. c. Verifies the disposition conditions have been implemented and complied (refer to procedure for alternate) d. Provides verification of actions required by the disposition. 	Para. 5.10				
15.2.15.	Verify that the QADCC: <ul style="list-style-type: none"> a. Maintains the NR log and copies of the issued NR form. b. Maintains a copy of the DOE-WVPO memo which identifies their review requirement with the applicable NR. c. Maintains the stamp per 5.11.4. d. Files original NR in the QA file when closed out. 	Para. 5.11				
15.2.16.	Verify that the QA Manager ensures that an analysis of nonconformances is conducted quarterly and report to cognizant management.	Para. 5.12.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 5 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.17.	Verify that quality clarification reports are used by WVNS QA Personnel per QAP 15-3.	QAP 15-3, Rev. 2, dated 6-11-91, Para. 4.0				
15.2.18.	<p>Verify that the following deficiencies are reported as trouble records:</p> <ul style="list-style-type: none"> a. Any single major deficiency. b. Recurring deficiency. c. A number of minor defects on the same system which reflect a serious situation. d. Repetitive locally corrected minor deficiencies which reflect a serious deficiency or a consistent problem. e. Items identified as Category II during construction turnover. 	WVNS-222, Rev. 3, Dated 11-26-92 Para. 5.0				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 6 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.19.	<p>Verify the following are performed by the responsible designee in sequence.</p> <p><u>a. Functional Activity Reporting Manager/Supervisor (FARM/S)</u></p> <ol style="list-style-type: none"> 1. Initiates and reviews Trouble Record Form. 2. Identifies distribution and assigns a required resolution date. 3. Routes Trouble Record to the WCC for processing. <p><u>b. Work Control Center (WCC)</u></p> <ol style="list-style-type: none"> 1. Assigns work control number and makes distribution. 2. Forwards the Trouble Record (J-12) to the cognizant engineering activity. 3. Enters the Trouble Record into the Open Items Tracking System. <p><u>c. Cognizant System Engineer (CSE)</u></p> <ol style="list-style-type: none"> 1. Resolves Trouble Report, provides technical resolution or shop/work order. 2. Agrees on resolution date. 3. Forwards original Trouble Record to the reporting manager/supervisor with recommended corrective action. 4. Forwards a copy of the Trouble Record to the WCC. 	<p>Para. 6.1 A-T</p>				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 7 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.19. Continued	<p>d. <u>Cognizant Activity Manager/Supervisor</u></p> <p>1. Concurs with recommended action and forward the Trouble Record to the WCC.</p> <p>NOTE: What is he doesn't concur. How is resolution obtained?</p> <p>e. <u>Cognizant System Engineering</u></p> <p>1. Obtains concurrence for any actions assigned to other WVNS departments.</p> <p>2. Reports status of the Trouble Reports.</p> <p>f. <u>Work Control Center</u></p> <p>1. Forwards the Trouble Record to cognizant engineering activity for closeout.</p> <p>g. <u>Cognizant System Engineer</u></p> <p>1. Returns signed off Trouble Record to the WCC.</p> <p>h. <u>Work Control Center</u></p> <p>1. Forwards the Trouble Record to functional activity reporting Manager/Supervisor for closeout.</p> <p>i. <u>Functional Activity Reporting Manager/Supervisor</u></p> <p>1. Returns signed off Trouble Record to the Work Control Center.</p> <p>j. <u>Work Control Center</u></p> <p>1. Review the Trouble Report for completeness and closes it out.</p> <p>2. Forwards Trouble Report to MRC for storage.</p>					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 8 Of 8	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
15.2.20.	Verify that Trouble Reports are completed per the instructions provided in this section.	Para. 6.2 A-O				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 5	
Organization Evaluated: West Valley Project Office (WVPO)		Audit Subject: CRITERION 16: Corrective Action Part I		Prepared By: <i>[Signature]</i> Audit Team Leader Date: 7/23/92		
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager Date: 7/24/92		
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
16.1.1	<u>Identification</u> Explain the process by which a WVPO condition adverse to quality (CAQ) is evaluated to determine if it is a significant CAQ	QAPD-2, Sec. 16.1 & QP-645, Sec. 5.1				
16.1.2	Determine the persons/positions responsible to identify significant CAQs	QAPD-2, Sec. 16.1 & QP-645, Sec. 5.1				
16.1.3	Verify that the WVPO Quality Verification Manager (QVM) reviews and evaluates the Quality Trend Report to determine any appropriate corrective measures to be taken	QP-646, Sec. 6.5				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 Of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
16.1.4	<u>Initiating a Request for Immediate Corrective Action (RICA)</u> Verify if WVPO personnel initiate a RICA for items or activities requiring immediate corrective action	QP-645, Sec. 6.3.1				
16.1.5	Determine if there is a mechanism for requesting corrective action for internal WVPO activities					

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 3 Of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
16.1.6	<p><u>Reviewing Corrective Actions</u></p> <p>Verify that cognizant WVPO staff members do the following with regard to corrective actions</p> <p>a) Review and concur with requested WVNS Requests for Corrective Action (RCAs)</p> <p>b) Evaluate and review WVPO Requests for Immediate Corrective Action (RICAs)</p> <p>c) Review and approve corrective actions resulting from WVNS nonconformances affecting activities within the DOE/RW-0214 waste acceptance envelope</p>	QP-645, Sec. 5.2.2, 5.5, 6.2.1, 6.2.2			
16.1.7	<p>Verify that the CVM coordinates evaluations/reviews by the WVPO staff verifying acceptable implementation of corrective action</p>				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 4 Of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Corrective Action Tracking</u>				
16.1.8	Verify that the responsible WVPO Program Manager tracks disposition of Corrective Actions through the WVPO Correspondence and Commitment Control and Tracking system or Open Items Control System	QP-645, Sec. 5.3			
16.1.9	Verify that the OVM tracks and follows-up on RICAs	QP-645, Sec. 5.4			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 5 Of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
16.1.10	<p><u>Closeout</u></p> <p>Verify that the CVM/cognizant staff verify implementation and documentation of corrective action</p>	QP-645, Sec. 6.3.2			

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 1	
Organization Evaluated: West Valley Nuclear Services (WVNS)		Audit Subject: CRITERION 16: Corrective Action Part II		Prepared By: <i>[Signature]</i> Audit Team Leader		Date: 7/23/92 7/24/92
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: <i>[Signature]</i> QA Program Manager		Date: 7/24/92
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVNS Corrective Action Activities</u>					
16.2.1	Determine how a condition requiring corrective action gets to the Quality Assurance Representative (QAR)	QAP 16-1, Sec. 5.1.1				
16.2.2	Verify that the Quality Engineer (QE) assures that proposed corrective action is acceptable	QAP 16-1, Sec. 5.2.1				
16.2.3	Verify that Requests for Corrective Action are routed to WVPO when requested to do so	QAP 16-1, Sec. 5.2.3				
16.2.4	Determine if the QAR verifies the implementation of the accepted corrective action	QAP 16-1, Sec. 5.3.1				

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 of 3	
Organization Evaluated: West Valley Project Office (WVPO) West Valley Nuclear Services (WVNS)		Audit Subject: Criterion 17: QA RECORDS		Prepared By: <i>[Signature]</i> Audit Team Leader Date: 7/23/92 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager Date:	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
<u>WVPO</u>					
17.1.1	Have QA records been identified and indexed?	WVPO-QP-644, Rev.3, Sec.6.1			
17.1.2	Have QA records temporarily stored been protected? +Has the QA records been indexed (chronologically or by title)? +Has the QA records been stored in a lockable 1hr. fireproof file?	WVDP-QP-644, Rev.3, Sec.6.4			
17.1.3	Are QA records being transmitted to permanent storage in an effective and timely manner? +With-in 1 year? +Are the transmittals providing the traceability and retrievability data for indexing and record retrieval?	WVPO-QP-644, Rev.3, Sec.6.5			
17.1.4	For High-Level Waste personnel, are personnel qualification, training, and certification records maintained in accordance with DOE System 80?	DOE/RW-214, Rev.3, ICN4.1, Sec.17.9			
<u>WVNS</u>					
17.2.1	Are specific controls in the QAPD, regarding QA records, incorporated into WVDP implementing procedures? +Are procedures established? +Are records identified? +Are records authenticated? +Are records collected and protected? +Are records corrected in accordance with established procedures? +Are interface procedures established and implemented for contractors, suppliers, and engineering?	WVDP-074, QAPD-3, Rev.2, Sec.17.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-AU-WV-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 of 3	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
17.2.2	<p>Is the Projects' Master Record Center (MRC) implementing QAPD QA record requirements?</p> <p>•Are records being collected/stored?</p> <p>•Has a records retention schedule been established and implemented?</p>	WVDP-074, QAPD-3, Rev.2, Sec. 17.2				
17.2.3	<p>Has WVDP QAPD lifetime record requirements been implemented to transfer lifetime records to DOE HQ (MD)?</p> <p><u>Note:</u> Applies to Qualification Process records only.</p>	WVDP-074, QAPD-3, Rev. 2, Sec. 17.2				
17.2.4	<p>Has the WVDP QAPD requirements for the MRC compliance to NQA-1, Supplement 17S-1 for storage, preservation, and safe keeping been implemented?</p>	WVDP-074, QAPD-3, Rev.2, Sec. 17.2				
17.2.5	<p>Has the WVDP implemented DOE SYSTEM 80?</p>	DOE/RW-0214, Rev.4, ICN 4.1, Sec. 17.8				
17.2.6	<p>Are cognizant QA personnel reviewing specifications purchase requisitions and other documents to assure records are specified?</p> <p>•Are records identified?</p>	QAP 17-1, Rev.5, Sec.5.1				
17.2.7	<p>Is the QA Record file maintained effectively?</p> <p>•Is the file subdivided into groups identified in "Attachment A" of QAP 17-1, Rev.5?</p> <p>•For each document is there a separate folder or binder?</p> <p>•Is there an identification for each record?</p> <p>•Are the records indexed?</p> <p>•Is the QA Record file being maintained in sequential order?</p>	QAP 17-1, Rev.5, Sec.5.7.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-AU-WV-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 3 of 3	
Attribute/Item/Description		Reference(s) (Requirement)	Description of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
17.2.8	Are minor changes to QA records lined through, initialed, and dated?	QAP 17-1, Rev.5, Sec.5.9.1				
17.2.9	Are major changes to QA records approved in the same manner as the original record was approved?	QAP 17-1, Rev.5, Sec.5.9.2				
17.2.10	Do the transmittals (form WV-1076) from QA to the MRC include date, listing of file contents, and signature of originator?	QAP 17-1, Rev.5, Sec.5.9.3				
17.2.11	Does QA maintain receipt control acknowledgements for transmitted records effectively?	QAP 17-1, Rev.5, Sec.5.9.3				

Quality Assurance Audit Checklist

(Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)		Page 1 of 10	
Organization Evaluated: West Valley Project Office (WVPO)		Audit Subject: CRITERION 18, "Audits" Part 1 (Includes Assessment and Surveillance)		Prepared By: <i>[Signature]</i> Audit Team Leader Date: 7/24/92	
Date(s) Of Evaluation: July 27 - 31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager Date:	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Establishing the Audit Program</u>				
18.1.1	Verify that WVPO has established an audit program in collaboration with DOE-ID	QAPD-2, Sec. 18.1.1			
18.1.2	Verify that the audit program has the following features: <ul style="list-style-type: none"> a) Comprehensive in scope b) Provides independent verification/evaluation c) Covers both internal and external d) Covers major program participants and their suppliers e) Evaluate status and adequacy of the QA Program <ul style="list-style-type: none"> - methods - procedure - activities 	QAPD-2, Sec. 18.1.1			
18.1.3	Determine that the WVPO QVM exercises lead responsibility for performing or directing necessary activities to assure that audits have: <ul style="list-style-type: none"> a) Adequate technical content b) Appropriate technical competence of audit team c) Sufficient analysis of audit data d) Follow-up for completion and adequacy of corrective action e) Adequate records submitted for retention 	QAPD-2, Sec. 18.1.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 2 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Planning and Scheduling</u>				
18.1.4	Verify that audits are planned in collaboration with DOE-ID on an annual basis	QAPD-2, Sec. 18.1.1			
18.1.5	Verify that the WVPO QVM is preparing and maintaining an annual audit schedule	QAPD-2, Sec. 18.1.1 & QP-640, Sec. 6.3			
18.1.6	Verify that the audit schedule is updated quarterly or as changes occur	QAPD-2, Sec. 18.1.1 & QP-640, Sec. 6.3			
18.1.7	Determine if unscheduled audits are performed and documented as necessary	QP-640, Sec. 5.5			
18.1.8	Verify that audit planning for major participant programs is designed to include an objective evaluation of: <ul style="list-style-type: none"> a) Quality-related practices, procedures and instructions; b) the effectiveness of implementation; and c) the conformance with policy directives 	QAPD-2, Sec. 18.1.1			
18.1.9	Determine how the WVPO QVM ensures that internal and external audits are planned and performed in accordance with the established schedule	QP-640, Sec. 6.7.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 3 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Team</u>				
18.1.10	Verify that audits are conducted (led) by a qualified lead auditor	QP-640, Sec. 6.3			
18.1.11	Verify that the WVPO QVM qualifies and certifies lead auditors per NQA-1 Supplement 2S-3. (Including annual evaluations)	QP-640, Sec. 5.3			
18.1.12	Verify that audit teams include appropriately trained and qualified representations in the technology being audited	QAPD-2, Sec. 18.1.1			
18.1.13	Determine how Lead Auditors assure that the audit team collectively have experience and training commensurate with the scope, complexity and special nature of the activities to be audited	QP-640, Sec. 6.7.2			
18.1.14	Verify that audit personnel do not have direct responsibilities in the areas being audited	QAPD-2			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 4 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Performance</u>				
18.1.15	Verify that an audit plan is prepared for each audit	QAPD-2, Sec. 18.1.1			
18.1.16	Verify that audits are conducted in accordance with written procedures and checklists	QAPD-2, Sec. 18.1.1			
18.1.17	Verify that the Lead Auditor does the following: a) Holds a pre-audit conference b) Periodically meets with the audit team to review progress, resolve issues, modify checklists and identify findings c) Notifies appropriate management of conditions requiring prompt corrective action d) Schedules and conducts a post-audit conference e) Prepares draft audit report	QP-640, Sec. 6.7.2			
18.1.18	Determine if WVPO audits include evaluation of: a) Work areas b) Activities (including personnel training and indoctrination) c) Processes d) Items	QAPD-2, Sec. 18.1.1			
18.1.19	Determine if documents and records are reviewed to ensure that the QA Programs are effectively and properly implemented	QAPD-2, Sec. 18.1.1			
18.1.20	Verify that interface controls are evaluated for major participant programs (internal and external)	QAPD-2, Sec. 18.1.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 5 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Reporting</u>				
18.1.21	Determine that the Lead Auditor prepares and signs the Audit Report	QP-640, Sec. 6.8.2			
18.1.22	Verify that the WVPO QVM or Director signs the Audit Report transmittal letter	QP-640, Sec. 6.8.1			
18.1.23	Verify audit results are reported to responsible management, including WVPO, DOE-ID and DOE-EM	QAPD-2, Sec. 18.1.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 6 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Corrective Action and Follow-up</u>				
18.1.24	Determine that the auditee identifies the cause and takes action to correct deficiencies	QAPD-2, Sec. 18.1.1			
18.1.25	Verify that the Lead Auditor reviews action responses to audit findings for adequacy and prepares request for additional action if necessary	QP-640, Sec. 6.8.2			
18.1.26	Determine if Lead Auditors follow-up on corrective action commitments to assure they are implemented	QP-640, Sec. 6.8.2			
18.1.27	Verify that actions not complete are identified and tracked	QP-640, Sec. 6.8.2			
18.1.28	Verify that an audit closure letter is issued when actions are completed (Signed by WVPO QVM)	QP-640, Sec. 6.8.2			

Quality Assurance Audit Checklist

(Continuation Page)

Audit ID. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 7 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Records</u>				
18.1.29	Verify that the Lead Auditor establishes an audit record file and transmits to the WVPO QVM	QP-640, Sec. 6.6.3			
18.1.30	Verify that audit record files contain the following: a) Audit notification and checklist b) Past-audited conference meeting minutes c) Audit report and closeout report	QP-640, Sec. 6.6.3			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 8 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Management Assessment</u>				
18.1.31	Verify that the WVPO Director has caused an annual management assessment of WVDP activities as they relate to WVPO	QP-640, Sec. 6.9 QP-662, Sec. 1.0, 5.1.1, 5.1.2, 6.1.1			
18.1.32	Verify that the WVPO Director selects an Assessment Review Committee (ARC) consisting of a chairperson and at least two members	QP-662, Sec. 6.1.2			
18.1.33	Determine if the ARC members are from the DOE-ID Director level (or above) and/or the executive level management of consultant or other organizations	QP-662, Sec. 6.1.2			
18.1.34	Determine if management assessments cover the following areas: a) Effectiveness of Environmental, Safety, Health and Quality Assurance (ESH&QA) Program Implementation, b) Adequacy of planning and procedural controls, c) Effectiveness of corrective action, d) Adequacy of WVPO organizational structure and staffing for ESH&QA Program Implementation, e) Adequacy of WVPO indoctrination and training, f) Adequacy of QA Program information evaluation and reporting	QP-640, Sec. 6.9.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 9 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
18.1.35	<p>Verify that during the assessment process the ARC considered the following:</p> <ul style="list-style-type: none"> a) QA program status and the degree of success in meeting the goals, mission and objectives. b) Conformance with established requirement, commitments and plans. c) Identification of potentially significant management problems and corrective actions. d) Recommendation for changes and improvement and potential change impacts in management controls. e) Compliance to requirements. f) The overall effectiveness of the program. 	QP-662, Sec. 6.1.4.C			
18.1.36	<p>Verify that ARC meeting minutes provide the overall assessment results</p>	QP-662, Sec. 6.1.4.D			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 10 of 10

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Surveillances</u>				
18.1.37	Verify that surveillances are planned annually	QP-640, Sec. 6.6.1			
18.1.38	Determine if checklists are used for performing surveillances (Recommended)	QP-640, Sec. 6.6.2			
18.1.39	Verify how surveillance personnel are determined to be: a) Knowledgeable in the activity b) Not directly responsible for performing the work	QAPD-2, Sec. 18.1.2			
18.1.40	Verify that significant deficiencies, nonconformances and potential quality problems are documented on WVPO Audit/Surveillance Report	QAPD-2, Sec. 18.1.2 & QP-640, Sec. 6.6.3			
18.1.41	Determine if corrective action is being performed for identified deficiencies	QAPD-2, Sec. 18.1.2			

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 of 5	
Organization Evaluated: WVNS		Audit Subject: CRITERION 16, "Audits" Part II		Prepared By: <i>[Signature]</i> Audit Team Leader	Date: 7/24/92 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification		Approved By: QA Program Manager	Date:	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>WVNS Audit Planning and Scheduling</u>					
16.2.1	Verify that Project Appraisals issues an annual audit schedule for internal and external audits	QM-16, Sec. 2.2 & QAP 16-1, Sec. 5.1.1				
16.2.2	Determine if the audit schedule is reviewed and reissued every three months	QAP 16-1, Sec. 5.1.1				
16.2.3	Verify that audits are scheduled at a frequency commensurate with the status and importance of the activity	QM-16, Sec. 2.2.1				
16.2.4	Verify that internal audits of each NQA-1 Criterion is performed annually	QM-16, Sec. 2.2.1				
16.2.5	Verify that external audits are conducted at least triennially when supplemented by annual documented evaluations	QM-16, Sec. 2.2.1				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 2 of 5	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
	<u>Audit Team</u>					
18.2.6	Verify that audits are led by a qualified lead auditor	QAP 18-1, Sec. 4.4				
18.2.7	Verify that audit team members are independent of responsibility for the areas they are auditing	QM-18, Sec. 22.2.2 & QAP 18-1, Sec. 5.3.11				
18.2.8	Verify that the Audit Team Leader ensures that the audit team is prepared	QM 18, Sec. 22.2.3				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 3 of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Performance</u>				
18.2.9	Verify that an audit plan is prepared for each audit	QAP 18-1, Sec. 5.3.1			
18.2.10	Verify that audits are conducted in accordance with an audit checklist	QAP 18-1, Sec. 5.4.1			
18.2.11	Determine if the Audit Team Leader/Audit Team do the following: a) Hold an audit entrance meeting b) Notify appropriate management of conditions requiring prompt corrective action c) Schedules and conducts an exit meeting d) Verifies audit findings with the audited organization e) Prepares a draft audit report	QAP 18-1, Sec. 5.4.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 4 of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Audit Reporting</u>				
18.2.12	Verify that a formal audit report is prepared within two weeks after an audit	QAP 18-1, Sec. 5.5.1			
18.2.13	Determine if the audit report identifies areas audited and found to be in compliance	QAP 18-1, Sec. 5.5.1			
18.2.14	Determine if the report contains a statement on the effectiveness of the QA program elements audited	QAP 18-1, Sec. 5.5.1			
18.2.15	Verify that the audit transmittal letter is signed by the QA Manager	QAP 18-1, Sec. 5.5.1			

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 5 of 5

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
	<u>Corrective Action and Follow-up</u>				
18.2.16	<p>Verify that the Audit Team Leader does the following:</p> <ul style="list-style-type: none"> a) Maintains surveillance to ensure that required responses are provided b) Reviews audits responses c) Notifies audited organization of acceptance of response as need for additional action d) Monitors corrective action status 	QAP 18-1, Sec. 5.7.1			
18.2.17	Verify that the Audit Team Leader or Audit Team Member follows-up to ensure corrective action described in audit response is implemented	QAP 18-1, Sec. 5.8			
18.2.18	Verify that an audit closure notification letter is sent to the audited organization when all required actions are complete	QAP 18-1, Sec. 5.9			

Quality Assurance Audit Checklist (Cover Page)

Audit I.D. No: 92EA-WV-AU-001		Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)			Page 1 Of 2	
Organization Evaluated: West Valley Project Office (WVPO) West Valley Nuclear Services (WVNS)		Audit Subject: CRITERION 19: Computer Software	Prepared By: <i>[Signature]</i> Audit Team Leader		Date: 7/23/92 7/24/92	
Date(s) Of Evaluation: July 27-31, 1992		Type of Audit: QA Program Qualification	Approved By: <i>[Signature]</i> QA Program Manager		Date: 7/24/92 7/24/92	
Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date	
No.	Description					
<u>Part I</u>	<u>WVPO</u>					
19.1.1	Verify that WVPO monitors computer software controls of WVNS	QAPD-2, Sec. 19.1				
<u>Part II</u>	<u>WVNS</u>					
19.2.1	Determine if software to be controlled is identified in the Waste Form Compliance Plan	QAPD-3, Sec. 19.2				
19.2.2	Verify that WVNS procedural controls provide for: a) A Computer Software Quality Assurance Plan (SQAP). b) Computer Software Verification and Validation. c) Computer Software Configuration Management. d) Qualification of Existing Software. e) Computer software Documentation. f) Computer software Development Reviews. g) Discrepancy reporting and Corrective Action. h) Media Control and Physical Security. i) Control of Acquired Computer Software. j) Control of Computer Software Application.	QAPD-3, Sec. 19.2				

Quality Assurance Audit Checklist

(Continuation Page)

Audit I.D. No: 92EA-WV-AU-001

Audit Area: WEST VALLEY DEMONSTRATION PROJECT (WVDP)

Page 2 Of 2

Attribute/Item/Description		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S=Sat. U=Unsat. N/A	Verifier Initials/ Date
No.	Description				
19.2.3	Verify that Levels of Control are assigned to computer software	QM 3-1, Sec. 1.0, 2.0			
19.2.4	Determine if the Software QA Plan describes the life cycle controls established at WVNS. Life cycle elements, as appropriate, are: a) The requirement phase b) The design phase c) The implementation and review phase d) The testing phase e) The installation and checkout phase f) The operations and maintenance phase	QM 3-1, Sec. 2.2			
19.2.5	Verify that software development and control procedures provide for: a) Development, review and approval b) Validation and verification of essential software c) Configuration management of essential software				

ADMINISTRATION AND CONDUCT OF QUALITY ASSURANCE AUDITS

1. PURPOSE AND SCOPE:

To provide instructions for the administration of the quality assurance audit practice, to include audit planning, follow-up, and closure of audits; and the conduct of quality assurance audits and reporting results.

2. REFERENCES:

- a. QAP-EM-1-2.1, Qualification and Certification of EM Audit and Appraisal Personnel
- b. SPP 3.03, Qualification of Quality Assurance Audit Personnel
- c. SPP 5.01, Deviations and Corrective Actions
- d. SPP 4.01, Planning and Scheduling of Evaluation and Assessment Activities
- e. SPP 7.01, Preparation, Transfer, and Receipt of Quality Records

3. GENERAL:

- a. Discussion

When contractor Certified Lead Auditors are assigned to perform the Audit Team Leader's task (per the requirements of SPP 3.03), EM-343 will assign a DOE person as an Audit Manager.

The person assigned as Audit Manager has the responsibility to manage the EM-343 Headquarters audit responsibilities. These responsibilities include, but are not limited to, ensuring the audit is properly planned, ensuring the audit remains on schedule and within budget, remains within the scope of work, ensuring the Team Leader maintains control of the audit, and assurance that all required documentation is completed. The Audit Manager is the interface representative between the Audit Team Leader and the EM-343 Division Director/Quality Assurance Program Manager.

The Audit Manager attends the pre-audit conference, in-process audit meetings or conferences, and the post-audit conference as a minimum, to ensure implementation of his/her responsibilities.

The audit process is accomplished through the use of the following procedures, as applicable:

- QAP-EM-1-2.1, "Qualification and Certification of EM Audit and Appraisal Personnel," for the certification of Lead Auditors by EM-20.
- SPP 3.03, "Qualification of Quality Assurance Audit Personnel," for documenting the qualification of auditors including technical specialists and management representatives.
- SPP 4.01, "Planning and Scheduling of Evaluation and Assessment Activities," for the overall and specific scheduling of audits, surveillances, and reviews on a long-range, annual, and quarterly basis.
- This procedure provides instructions for the administration and conduct of quality assurance audits.
- SPP 5.01, "Deviations and Corrective Actions," for reporting deviations and requesting corrective actions respectively that may result from an audit.
- SPP 7.01, "Preparation, Transfer, and Receipt of Quality Assurance Records," for the dispositioning of closed out audit records.

External organizations such as the Office of Civilian Radioactive Waste Management (RW), the Nuclear Regulatory Commission (NRC), the State of Nevada, etc., may choose to observe audits conducted in accordance with this procedure. They may observe the pre-audit or post-audit meetings or the actual conduct of the audit, but shall not take an active role in the audit process. The observers will use an "Audit Observer Inquiry" form (reference Attachment B) to address questions, observations, or recommendations during the activity. The Audit Team Leader will provide a response for each Audit Observer Inquiry Form received.

b. Definitions

- (1) **Audit** - A planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence the adequacy of and compliance with established procedures, instructions, drawings, and other applicable documents, and the effectiveness of implementation. An audit should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance.

- (2) **Audit Manager** - A DOE-EM-343 person assigned the responsibility to overview and manage audit activities when contractor Certified Lead Auditor personnel are selected as audit team leaders for EM-343-led audits.
- (3) **External Audit** - An audit of those portions of another organization's quality assurance program not under the direct control or within the organizational structure of the auditing organization.
- (4) **Internal Audit** - An audit of those portions of an organization's quality assurance program retained under its direct control and within its organizational structure.
- (5) **Objective Evidence** - Any documented statement of fact, other information, or record, either quantitative or qualitative, pertaining to the quality of an item or activity, based on observations, measurements, or tests which can be verified.
- (6) **Item** - An all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, or unit.

4. **PROCEDURE:**

Attachment A is a flow diagram depicting the overall work process associated with this procedure.

The audit manager's actions are only implemented when an audit manager is required and assigned.

a. **Audit Planning**

<u>Performer</u>	<u>Action</u>
Quality Assurance Program Manager	<ul style="list-style-type: none"> (1) Assigns an audit manager (when required) and a certified lead auditor as audit team leader. A DOE audit manager is assigned when the certified lead auditor is a contract person. (2) Ensures the audit manager, certified lead auditor, and audit team members are independent of any direct responsibility for performance of the activities which they will audit.

<u>Performer</u>	<u>Action</u>
Quality Assurance Program Manager	(3) Assigns audit team members who meet the requirements of SPP 3.03 and establishes audit scope. (4) Ensures the audit manager receives orientation training in the audit process.
Audit Team Leader	(5) Concurs that assigned audit team personnel collectively have experience or training commensurate with the scope, complexity, or special nature of the activities to be audited prior to commencing the audit. (6) Prepares the draft audit scope and planning document (reference Attachment C) to include at a minimum: <ul style="list-style-type: none">(a) Audit Scope(b) Requirements(c) Audit Team Members(d) Activities to be Audited(e) Organizations to be Notified(f) Applicable Documents(g) Schedule (7) Ensures the preparation of the audit checklists by consulting with audit team members. The checklists include the following at a minimum: <ul style="list-style-type: none">(a) A unique identifier to tie the checklist to the audit.

<u>Performer</u>	<u>Action</u>
Audit Team Leader	<ul style="list-style-type: none">(b) Verifications to be performed with reference to the applicable requirement.(c) Space to record the objective evidence examined or observed, names of individuals contacted, and statements regarding the acceptability of the activity or item (reference Attachment D).
Audit Manager	<ul style="list-style-type: none">(8) Reviews the audit scope and planning document and approves by signing the document.(9) Reviews the checklists to gain knowledge of the audit activity.
Quality Assurance Program Manager	<ul style="list-style-type: none">(10) Approves the final audit scope and planning document.
Division Director	<ul style="list-style-type: none">(11) Issues an audit notification letter to the audited organization at least two weeks prior to the audit to identify the following:<ul style="list-style-type: none">(a) Scope of the audit(b) Scheduled dates of the audit(c) Names of the audit team members
Audit Team Leader/Audit Team Members	<ul style="list-style-type: none">(12) Prepares for the audit by studying the final audit scope and planning documents, the checklists, and any other documentation considered to be necessary.

b. Conducting a Pre-Audit Conference

<u>Performer</u>	<u>Action</u>
Audit Team Leader	(1) Conducts a pre-audit conference with the management of the organization being audited to outline the activities to be covered by each team member; to outline the scope, plan, and schedule of the audit; to establish the necessary channels of communication; and to identify the facilities to be used.

c. Conducting the Audit

Audit Team Members	(1) Use the checklist as a guide to observe work activities, conduct personnel interviews, review records, and examine objective evidence for proper and effective implementation. (2) Record on the checklists the names and titles of personnel contacted during the audit, specific identification of the activities and items audited, objective evidence evaluated, and the results of the audited activity. (3) Meet regularly with the audit team leader to discuss findings and to bring the team leader up to date on the audit progress. (4) Record adverse findings on a Deviation and Corrective Action Report (DCAR) in accordance with SPP 5.01.
Audit Team Leader/ Audit Manager	(5) Reviews preliminary results of the audit. (6) Elevates to the Division Director/Quality Assurance Program Manager any unresolved issues occurring between them, for resolution.

d. Conducting a Post-audit Conference

<u>Performer</u>	<u>Action</u>
Audit Team Leader	<p>(1) Conducts the post-audit conference with an appropriate level of the audited organization's management to:</p> <ul style="list-style-type: none">(a) Present an overall summary of the audit results, as well as a brief explanation of each individual audit finding.(b) Inform the audited organization that they will be required to formally respond to each deviation upon receipt of the formally transmitted audit report and deviation reports.(c) Provides the audited organization a copy of the draft DCARs at the end of the post-audit conference.

e. Completing the Audit Report

Audit Team Leader	<p>(1) Prepares the formal audit report to include:</p> <ul style="list-style-type: none">(a) Description of the Audit Scope(b) Identification of the audit manager(c) Identification of the auditors(d) Identification of individuals contacted during audit activities(e) Summary of audit results, including a statement on the effectiveness of the quality assurance program elements which were audited(f) Description of each reported adverse audit finding in sufficient detail to enable corrective action to be taken by the audited organization
-------------------	---

<u>Performer</u>	<u>Action</u>
Audit Team Leader	(2) Signs and dates the audit report.
Audit Manager	(3) Signs and dates the audit report indicating concurrence.

f. Conducting Post-Audit Activities

Quality Assurance Program Manager	(1) Receives the completed audit report, audit checklists, and any DCARs originated during the audit.
	(2) Reads the audit report and identifies information for future evaluation planning and scheduling in accordance with SPP 4.01.
Division Director	(3) Issues an audit report transmittal letter (reference Attachment E) with a copy of the audit report to: <ul style="list-style-type: none"> (a) Management of the audited organization (b) Cognizant Program Manager (c) Quality Assurance Program Manager (d) Cognizant Quality Assurance Specialist

g. Following Up and Closing an Audit

Division Director	(1) Upon receipt of the final closed out DCAR, issues an audit closure letter to officially close the audit, including the following at a minimum: <ul style="list-style-type: none"> (a) The audit scope and identification number (b) Dates of the audit
-------------------	--

<u>Performer</u>	<u>Action</u>
Division Director	(c) The organizations involved (d) Identification of the closed DCARs (2) Issues closeout letter to the audited organization management, the cognizant Program Manager, the Quality Assurance Program Manager, and the cognizant Quality Assurance Specialist.
h. Records	
Quality Assurance Specialist	(1) Processes the following records into the quality records system in accordance with SPP 7.01: (a) Audit Scope and Planning Documents (b) Completed Audit Checklists (c) Audit Report (d) Closed out Deviation and Corrective Action Reports (e) Post-Audit Correspondence (f) Audit Notification Letter (g) Audit Transmittal Letter (h) Documentation of audit team assignment (i) Completed Audit Observer Inquiry Forms (j) Contractor Certified Lead Auditor qualification and certification documentation and basis for selection

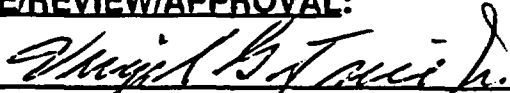
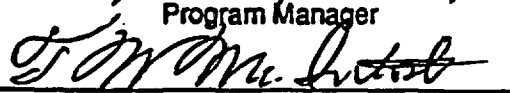

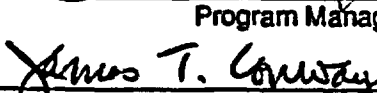

5. ATTACHMENTS:

- a. Attachment A - Administration and Conduct of Quality Assurance Audits Work Flow Diagram**
- b. Attachment B - Audit Observer Inquiry Form (Example)**
- c. Attachment C - Audit Scope and Planning Document (Example)**
- d. Attachment D - Quality Assurance Audit Checklist (Example)**
- e. Attachment E - Audit Report Transmittal Letter (Example)**

6. REVISIONS LISTING:

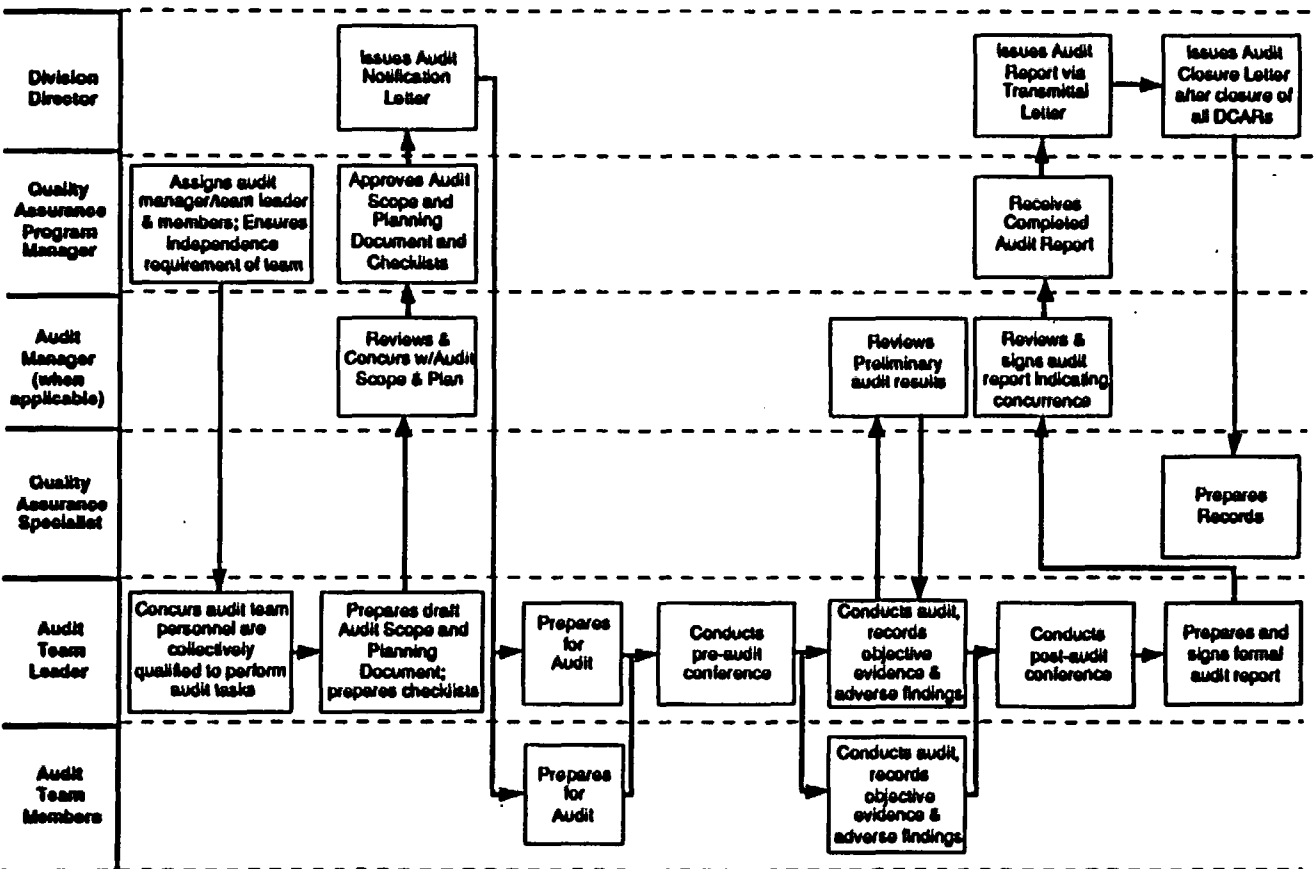
<u>Revision Number</u>	<u>Description</u>	<u>Date Approved</u>
0	New Procedure	02/02/90
1	Major rewrite to update and clarify this procedure	02/18/92
2	Revised to permit use of contractor lead auditors, added responsibilities and actions of an audit manager, added independence and lead auditor concurrence requirements, documentation of objective evidence evaluated, upgraded division file documents to quality records, revised flow diagram and Attachment D, and minor changes	See Section 7

7. CONCURRENCE/REVIEW/APPROVAL:

Concurrence:	<u></u>	<u>4/17/92</u>
	Program Manager	Date
Concurrence:	<u></u>	<u>4/20/92</u>
	Program Manager	Date
Concurrence:	<u></u>	<u>5/21/92</u>
	Program Manager	Date
Review:	<u></u>	<u>6/4/92</u>
	Quality Assurance Program Manager	Date
Approval:	<u></u>	<u>6/5/92</u>
	EM-343 Division Director	Date

Attachment A

Administration and Conduct of Quality Assurance Audits Work Flow Diagram



Attachment B

Audit Observer Inquiry Form (Example)

Audit Observer Inquiry	
Audit Number _____	
Name _____	Organization _____
Requirement Reference:	
Question/Concern _____ _____ _____ _____ _____ _____ _____ _____	
Response _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	
_____ Audit Team Leader	

Attachment C

Audit Scope and Planning Document (Example)

Audit Scope & Planning Document		Audit No. _____												
		Scheduled Date: _____												
<p>I. Organization Being Audited _____</p> <p>II. Audit Scope and Activities to be Audited</p> 														
<p>III. Requirements, including previous Evaluation Activities Of Same Or Similar Areas For Follow-up</p> 														
<p>IV. Team Members</p> 	<p>V. Organizations To Be Notified</p> 													
<p>VI. Controlling Documents And Revisions</p> <div style="text-align: right; margin-top: 20px;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Prepared by _____</td> <td style="width: 50%;">Date: _____</td> </tr> <tr> <td style="text-align: center;">Audit Team Leader</td> <td></td> </tr> <tr> <td>Concurred by _____</td> <td>Date: _____</td> </tr> <tr> <td style="text-align: center;">Audit Manager (when applicable)</td> <td></td> </tr> <tr> <td>Approved by: _____</td> <td>Date: _____</td> </tr> <tr> <td style="text-align: center;">Quality Assurance Program Manager</td> <td></td> </tr> </table> </div>			Prepared by _____	Date: _____	Audit Team Leader		Concurred by _____	Date: _____	Audit Manager (when applicable)		Approved by: _____	Date: _____	Quality Assurance Program Manager	
Prepared by _____	Date: _____													
Audit Team Leader														
Concurred by _____	Date: _____													
Audit Manager (when applicable)														
Approved by: _____	Date: _____													
Quality Assurance Program Manager														

Attachment D

Quality Assurance Audit Checklist (Example)

Quality Assurance Audit Checklist					
Audit I. D. No.		Audit Area		Page of	
Organization Evaluated:		Audit Subject		Date	
Date(s) Of Evaluation:		Type Of Audit:		Date	
Attribute / Item / Question		Reference(s) (Requirement)	Description Of Activities & Items Examined, Objective Evidence Evaluated, and Persons Contacted	Results S-Sat. U-Unsat. N/A	Verifier Initials / Date
No.	Description				

Attachment E

Audit Report Transmittal Letter (Example)

(Date) _____

(addressee) _____

(title) _____

(audited organization) _____

(address) _____

(city, state and zip code) _____

Quality Assurance Audit of _____ (audited organization)

Audit Number _____

To: _____

The attached report presents the results of the subject audit conducted at your facility on _____ (date). The results of the audit were discussed with _____ (audited organization's name) representatives at the post-audit meeting held on _____ (date).

The cooperation and responsiveness of your personnel during the conduct of the audit and during the post-audit meeting are noted and appreciated. (This may be modified at the discretion of the Audit Team Leader depending on the results of the audit.)

You are requested to reply to this report within 30 days of receipt. Address your reply to _____ (Audits Coordinator) and identify: (1) The actions to be taken to correct the reported deviations; (2) Actions taken to investigate situations similar to that identified in the deviation; (3) Actions to be taken to preclude recurrence of similar deficiencies, and a determination of the root cause of the deficiency; and (4) A schedule for completion of all involved actions.

Please document your response(s) on the attached Deviation and Corrective Action Report(s) (DCAR) and return the originals.

If you have any questions, please contact _____ (audit team leader) at _____

EM-343 Division Director

CC: (Audited Organization Senior Management) _____

(Audited Organization Quality Assurance Manager) _____

Audit Observer Inquiry Form

Audit Number _____

Name _____ Organization _____

Requirement Reference:

Question/Concern _____

Response _____

Audit Team Leader

Audit Observer Inquiry Form

Audit Number _____

Name _____ Organization _____

Requirement Reference:

Question/Concern _____

Response _____

Audit Team Leader

AUDIT ACTIVITY INFORMATION CHART

[illegible]

AUDIT ACTIVITY INFORMATION CHART

[illegible]

Deviation Corrective Action Report (DCAR)

DCAR No. _____ Revision _____
Date of discovery _____ Evaluated Organization _____
Evaluated Organization Representative _____
Corrective Action taken immediately _____

Activity _____ Location _____

Requirement(s) not met _____

Deviation description _____

Corrective Actions Required:

- Root cause analysis
- Action to prevent recurrence
- Action regarding similar work

Yes

No

_____	_____
_____	_____
_____	_____

Provide Response by: _____

Initiator _____ Date _____

QA Program Manager _____ Date _____

Program Manager _____ Date _____

Division Director _____ Date _____

Proposed Corrective Actions _____

Scheduled completion date _____

Evaluated Organization Representative _____ Date _____

Evaluation of Proposed Corrective Actions

Comments _____

Acceptable _____

Unacceptable _____

Evaluator _____ Date _____

Program Manager _____ Date _____

QA Program Manager _____ Date _____

Corrective Actions Complete:

Verified by _____ Date _____

Program Manager _____ Date _____

Verification Approved _____

Division Director _____ Date _____

Deviation Corrective Action Report (DCAR)

DCAR No. _____ Revision _____
Date of discovery _____ Evaluated Organization _____
Evaluated Organization Representative _____
Corrective Action taken immediately _____

Activity _____ Location _____

Requirement(s) not met _____

Deviation description _____

Corrective Actions Required:

- Root cause analysis
- Action to prevent recurrence
- Action regarding similar work

Yes

No

_____	_____
_____	_____
_____	_____

Provide Response by: _____

Initiator _____ Date _____

QA Program Manager _____ Date _____

Program Manager _____ Date _____

Division Director _____ Date _____

Proposed Corrective Actions _____

Scheduled completion date _____

Evaluated Organization Representative _____ Date _____

Evaluation of Proposed Corrective Actions

Comments _____

Acceptable _____
Unacceptable _____

Evaluator _____ Date _____

Program Manager _____ Date _____

QA Program Manager _____ Date _____

Corrective Actions Complete:

Verified by _____ Date _____

Program Manager _____ Date _____

Verification Approved _____ Date _____

Division Director _____ Date _____

Deviation Corrective Action Report (DCAR)

DCAR No. _____ Revision _____
Date of discovery _____ Evaluated Organization _____
Evaluated Organization Representative _____
Corrective Action taken immediately _____

Activity _____ Location _____

Requirement(s) not met _____

Deviation description _____

Corrective Actions Required:

- Root cause analysis
- Action to prevent recurrence
- Action regarding similar work

Yes

No

Provide Response by: _____

Initiator _____ Date _____

QA Program Manager _____ Date _____

Program Manager _____ Date _____

Division Director _____ Date _____

Proposed Corrective Actions _____

Scheduled completion date _____

Evaluated Organization Representative _____ Date _____

Evaluation of Proposed Corrective Actions

Comments _____

Acceptable _____
Unacceptable _____

Evaluator _____ Date _____

Program Manager _____ Date _____

QA Program Manager _____ Date _____

Corrective Actions Complete:

Verified by _____ Date _____

Program Manager _____ Date _____

Verification Approved _____

Division Director _____ Date _____

Deviation Corrective Action Report (DCAR)

DCAR No. _____ Revision _____
Date of discovery _____ Evaluated Organization _____
Evaluated Organization Representative _____
Corrective Action taken immediately _____

Activity _____ Location _____

Requirement(s) not met _____

Deviation description _____

Corrective Actions Required:

- Root cause analysis
- Action to prevent recurrence
- Action regarding similar work

Yes

No

_____	_____
_____	_____
_____	_____

Provide Response by: _____

Initiator _____ Date _____

QA Program Manager _____ Date _____

Program Manager _____ Date _____

Division Director _____ Date _____

Proposed Corrective Actions _____

Scheduled completion date _____

Evaluated Organization Representative _____ Date _____

Evaluation of Proposed Corrective Actions

Comments _____

Acceptable _____

Unacceptable _____

Evaluator _____ Date _____

Program Manager _____ Date _____

QA Program Manager _____ Date _____

Corrective Actions Complete:

Verified by _____ Date _____

Program Manager _____ Date _____

Verification Approved _____

Division Director _____ Date _____

Deviation Corrective Action Report (DCAR)

DCAR No. _____ Revision _____
Date of discovery _____ Evaluated Organization _____
Evaluated Organization Representative _____
Corrective Action taken immediately _____

Activity _____ Location _____

Requirement(s) not met _____

Deviation description _____

Corrective Actions Required:

- Root cause analysis
- Action to prevent recurrence
- Action regarding similar work

Yes

No

Provide Response by: _____

Initiator _____

Date _____

QA Program Manager _____

Date _____

Program Manager _____

Date _____

Division Director _____

Date _____

Proposed Corrective Actions _____

Scheduled completion date _____

Evaluated Organization Representative _____ Date _____

Evaluation of Proposed Corrective Actions

Comments _____

Acceptable _____

Unacceptable _____

Evaluator _____ Date _____

Program Manager _____ Date _____

QA Program Manager _____ Date _____

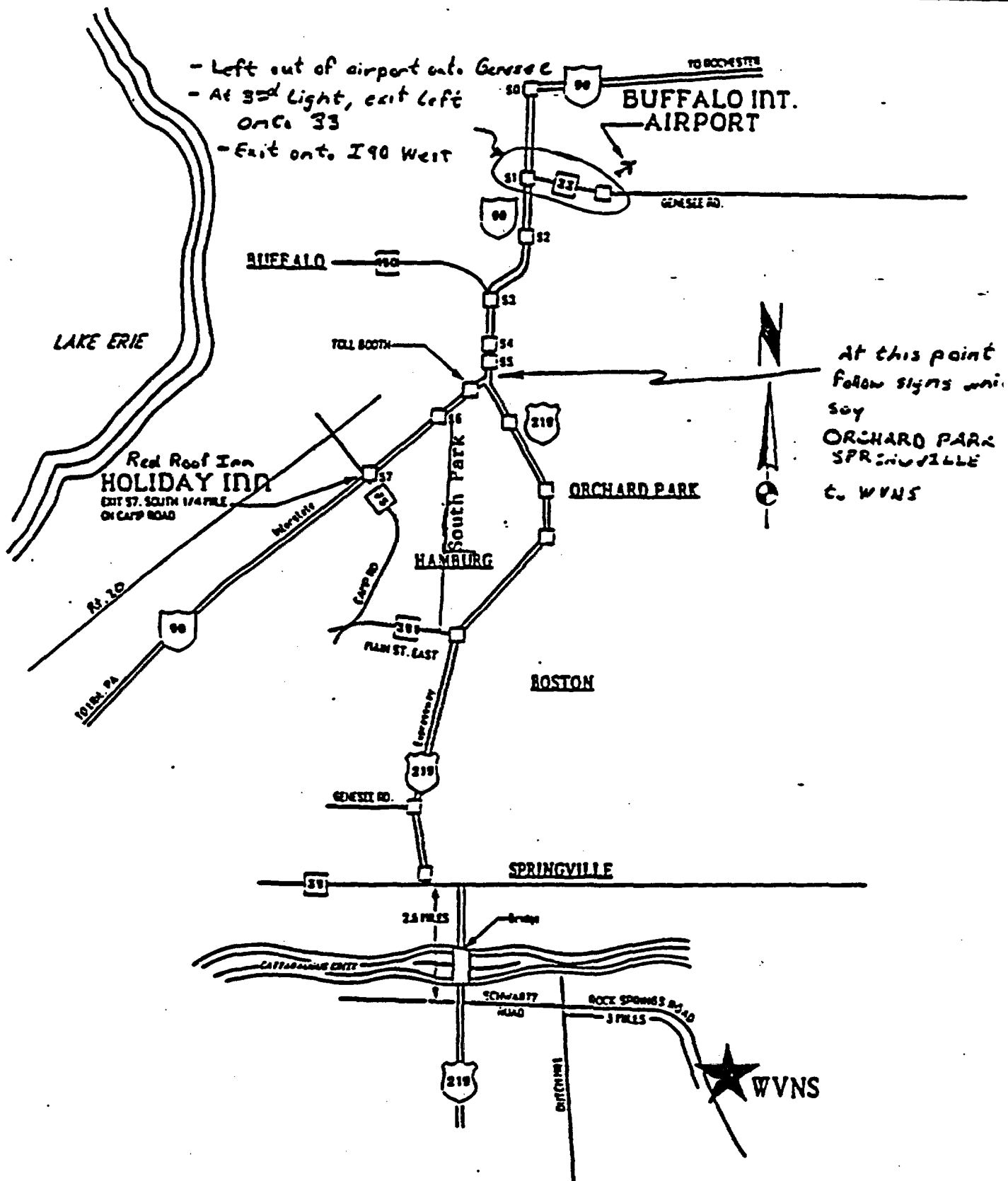
Corrective Actions Complete:

Verified by _____ Date _____

Program Manager _____ Date _____

Verification Approved _____

Division Director _____ Date _____



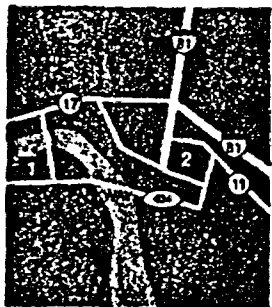
WEST VALLEY NUCLEAR SERVICES CO.
 P. O. Box 191
 West Valley, N. Y. 14171
 716-942-3235

BINGHAMTON
Vestal Pkwy. (Sunny Area)

① SATELLITE MOVIES
607/729-5371 (S) (MO). Location: 4105 Vestal Pkwy. Rt. 434 (13903). From Rt. 17 use Exit 70 South to Rt. 201. Follow Rt. 201 to Traffic Circle. Use Vestal Exit to Rt. 434 West. Airport 9 mi. Opp. SUNY Binghamton & Anderson Center. IBM 5 mi. GE 1 mi. Features: Free airport, trans. Appliances Rest. & Lounge. Guest Laundry. 140 rms. Mtps. to 300. Group/Govt. Rates. Rates: Tax 8%. XP \$5. Teens Free. RB \$5. Deposit: 5/25-27. BGMV
1 per Std. \$55-65; King L \$69-73
2 per Std. \$69-75; King L \$79-83

BINGHAMTON-Hawley St.
Dwtn. (Arena Area)

607/722-1212 (S) ② EOLF
Location: 2-8 Hawley St. (13001). Exit 4S off NY 17 & I-81 to Washington St. Exit Left onto Hawley St. Opp. Arena. The Forum (Theatre) 1/2 mi. Airport 10 mi. Features: Atrium Rest. Le Bar Lounge, enter. Indoor Pool. 245 rms. Mtps. to 700. Great Rates avail. Rates: Tax 8%. XP \$10. Teens Free. RB \$5. Executive, Suites avail. Deposit: 5/25-27, 10/13-16. BGMAR
1 per Std. \$79-95
2 per Std. \$89-96



BUFFALO AREA

NIAGARA FALLS—
See Page 86

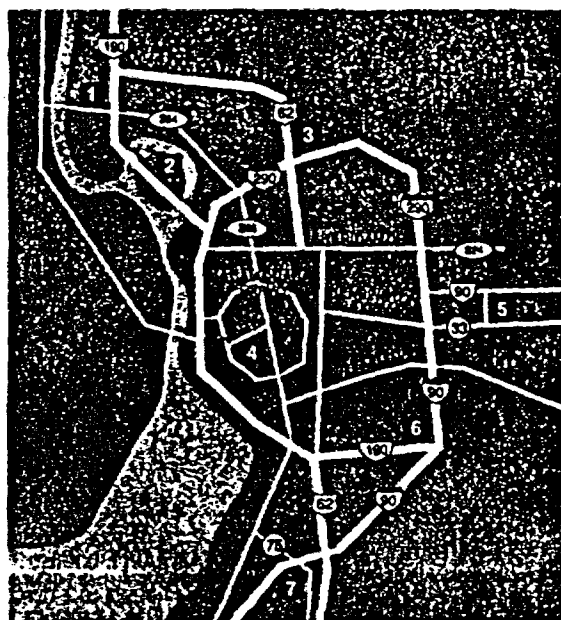
GRAND ISLAND—
See Page 86

BUFFALO-AMHERST

① SHOWTIME • HEALTH CLUB
716/631-8181 (S) (MO). Location: 1851 Niagara Falls Blvd., Tonawanda, NY (14150). Take I-190 to Exit 60, I-190 W. to N.E. Blvd. SUNY 1.5 mi. Airport 8 mi. Niagara Falls 15 mi. Canada 9 mi. Blvd. Mall 1 mi. Outlet Mall 14 mi. Galleria Mall 8 mi. Sports/Theatre/Dwtn. 10 mi. Located in Center of Industrial Area. Features: Comp. airport, trans. Sassafras Rest./Lounge, enter. Car Rental. Mtps. to 225/Value Mtg. Pkg. Corp./Govt./Group/Wind. Rates. No Pets. Rates: Tax 15%. XP \$6. Teens Free. RB \$6. Queen Sfts avail. BUFFA
1 per Std. \$65-78; King L \$68-81
2 per Std. \$75-88; King L \$78-91

BUFFALO-Downtown
620 Delaware Ave.

① CINEMA MOVIES • HEALTH CLUB
716/886-2121 (S) (MO). Location: 620 Delaware (14202). Exit on Niagara off 190, right on Niagara, left on Huron, left on Delaware. Health Club. Peace Bridge to Canada. Children's Hosp., Mem. Aud., Conv. Ctr., Main Place Mall, Federal & State Bldgs., Roosevelt Cancer Institute all 1 mi. Niagara Falls 20 mi. Features: Free Airport & Health Club Limo-limited schedule. Jougouls Cafe Rest. & Lounge. Function Rooms. Law-No Kennels. Rates: Tax 15%. XP \$5. Teens Free. RB \$5. Queen Sfts avail. BFMFT
1 per Std. \$59-69; King L \$63-73
2 per Std. \$67-77; King L \$77-81



BUFFALO-Int'l Airport

① HEALTH CLUB • SHOWTIME • TENNIS
716/634-6363 (S) (MO). ② ESPN
FAX 716/634-6321. Location: 4600 Genesee St. Cheektowaga (14225). Exit 61E off I-190. Dwtn. 10 mi. Airport 1/2 mi. Niagara Falls 25 mi. Rich Stadium 10 mi. Canada 12 mi. Galleria Mall 9 mi. Amtrak 5 mi. Pilot Field 10 mi. SUNY Amherst Campus 5 mi. Features: Free airport, trans. Brander's Rest. & Lounge. Car Rental. Gift Shop. Satellite TV. 210 rms. Rates: Tax 15%. XP \$8. Teens Free. RB \$5. Queen/King Sfts, Suites avail. BUFFA
1 per Std. \$73-77; King L \$75-80
2 per Std. \$81-85; King L \$84-88

BUFFALO-Gateway

① SHOWTIME • ② ESPN • ③ CNN
716/636-2800 (S) (MO). Location: 601 Diggins St. Buffalo (14206). From Canada: 180 S. to Exit N-1. From East or West: I-190 & I-190 (NY State Thruway) Exit 63 to Exit N-1, or Diggins St. Airport 8 mi. Dwtn. 2 mi. Rich Stadium 10 mi. Galleria Mall 4 mi. Niagara Falls 20 mi. Mem. Aud. 2 mi. SUNY Amherst 14 mi. Kissing Bridge 17 mi. Features: Free airport, lmo. Rb-eiz Post. & Sports Bar. Sid Pks. Room & Ride Pkg. Band. Fac. Group/Corp./Govt./Great Rates avail. Rates: Tax 15%. XP \$6. Teens Free. RB \$5. BUFFET
1 per Std. \$54-65; King L \$63-69
2 per Std. \$60-71; King L \$63-75

BUFFALO-RAMBOURG

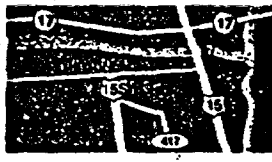
① HBO • FITNESS ROOM • SNOWSKIING
716/649-0500 (S) (MO). ② SAUNA
Location: Exit 57 on NY Thruway, I-190. (Rt. 75 South) 6440 Camp Rd. (14078). Dwtn. Buffalo 10 mi. Airport 16 mi. Buffalo Raceway 2 mi. Niagara Falls 30 mi. Kissing Bridge 16 mi. Holiday Valley 35 mi. Ford Motor 3 mi. Rich Stadium 4 mi. Erie County Fairgrounds 2 mi. Golf 1/2 mi. Features: Lounge. Cable TV. ESPN. Unisex Salon. 125 rms. Mtg. Rms. No Pets. No Kennels. Sid Pks. Corp./Group Rates. Waterbed avail. Rates: Tax 15%. XP \$5. RB \$5. BUFFB
1 per Std. \$49-58; King L \$60
2 per Std. \$53-60; King L \$66

CHAUTAUQUA—
See JAMESTOWN-DWNTN.
CHEEKTOWAGA— See BUFFALO

CORNING-PAINTED POST

① HBO • RACQUETBALL • GOLF
607/662-6021 (S) TENNIS
Location: 304 South Hamilton St. Painted Post (14870). Jct. US 185 & St. 417. From Rt. 17 take Painted Post Exit 44 & follow 165 towards Williamsport. Use Gang Mills Exit, turn left at Light. Airport 10 mi. Corning Glass Center 3 mi. Wineries 22 mi.

Watkins Glen 20 mi. Features: 1986, 1987 & 1988 Superior Hotel Award. Lounge. Gift Shop. Beauty Shop. ESPN. VCR & Movies avail. Mtps./Band. to 350. Rates: Tax 9%. XP \$5. RB \$6. Sg. Event: 5/25-26, 6/29-30, 8/8-11, 9/21-22. CBNNY
1 per Std. \$54-75; King L \$60-75
2 per Std. \$62-75; King L \$68-78

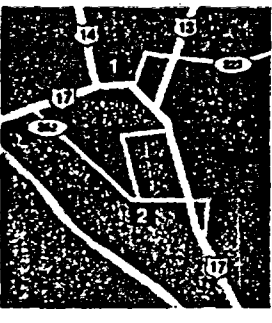


ELMIRA-HORSEHEADS

① HBO • TENNIS • RACQUETBALL • GOLF
607/739-3641 (S). Location: 602 Corning Rd. Horseheads, NY (14846). Exits 62, 62N & 62S near Elmira & Corning. Dwtn. 7 mi. Elmira/Corning Airport & Amot Mall 2 mi. Watkins Glen & Corning Glass 16 mi. Elmira Col. & Mark Twain Study 4 mi. Murry Athletic Ctr. & Fairgrounds 2 mi. Harris Hts 4 mi. Features: 1989 Superior Hotel Award. Lounge. 100 rms. Mtps./Band. Rates: Tax 9%. XP \$5. RB \$6. Sg. Event: 5/25-26, 6/29-30, 8/8-11, 9/21-22. ELMHH
1 per Std. \$55-75; King L \$60-75
2 per Std. \$60-75; King L \$65-75

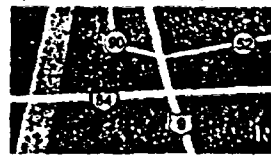
ELMIRA-Downtown

① HBO • RACQUETBALL • ② SAUNA
607/734-4211 (S). Location: Elmira Exit off Rt. 17. 1 Holiday Plaza (14901). Dwtn. 1/2 mi. Grand Prix Racetrack 23 mi. Clemens Ctr. 1/2 mi. Elmira College 1 mi. Features: Lounge, live enter. Indoor Pool (winter only). Gm Shop. 180 rms. Mtps. to 450. Rates: Tax 9%. XP \$5. Teens Free. RB \$6. Sg. Event: 6/25-26. ELMDT
1 per Std. \$59-65; King L \$63-65
2 per Std. \$63-70; King L \$73-78



FISHKILL

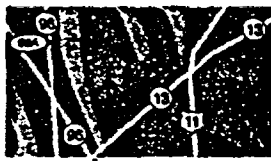
914/836-8281 (S). Location: Jct. I-84 & Rt. 9. Exit 13 (12524). Dwtn. 1 mi. Dutchess County Airport 5 mi. NY Thruway 6 mi. Roosevelt & Vanderbilt 16 mi. US Military Academy 20 mi. Wineries 16 mi. Art Sports & Shopping Mall within walking distance. Antique Village Haven 9 mi. Features: Toms Colonial Rest. Brass Rail Lounge, live enter, nightly. Dancing. Elevator Service. 150 rms. Wedding Reception/Pvt. Banq. to 450. No Pets in Rooms. Kennels avail. Rates: Tax 6%. XP \$7. Teens Free. RB \$7. FHKNY
1 per Std. \$56-64; King L \$68-72
2 per Std. \$63-70; King L \$75-80



GRAND ISLAND—
See NIAGARA FALLS
RAMBOURG— See BUFFALO
HAUPPACKE, LL— See Page 86
HORSEHEADS— See ELMIRA

ITHACA

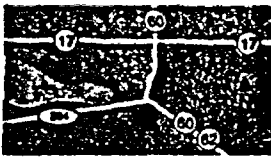
① BOATING • GOLF • HEALTH CLUB
607/257-3100 (S). Location: Jct. N. Triphammer Rd. & Rt. 13. 2310 N. Triphammer Rd. (14850). Dwtn. 4 mi. Airport 1 1/2 mi. NCH Co. 7 mi. Cornell 2 mi. Ithaca College 7 mi. Borg Warner 2 mi. Greek Peak 20 mi. Bus Terminal 5 mi. A.C. Malls/Theatre/YMCA. Features: Free trans. to Airport, Cornell U. & Ithaca Col. Winning tickets to specials. Daper Dana Rest./Lounge. Sunday Brunch. 120 rms. Mtps. to 350. Weekly/Monthly Rates. No Pets. Rates: Tax 10%. XP \$10. RB \$6. Sg. Event: 5/18-19, 5/25-26. Deposit: 5/19-20, 5/26-27. ITHNY
1 per Std. \$50-60; King L \$70-85
2 per Std. \$60-80; King L \$80-100



JAMAICA—See NY-JFK AIRPORT

JAMESTOWN-Dwtn.
(Chautauqua Lake)

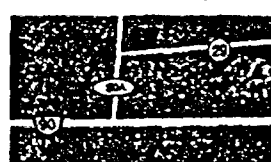
① IN-Room MOVIES ② SKIING
716/664-3400 (S) (MO)
FAX 716/484-3304. Location: 150 West Fourth St. (14701). Chautauqua Airport 4 mi. Dwtn. Chautauqua Institution 15 mi. Chautauqua Lake 4 mi. Features: The Colonnade Rest. "Fantasies" High Energy Night Club. Brass Oak Lounge. Indoor Pool. 149 rms. Mtps. to 400. Wind/Ski Rates avail. Rates: Tax 7%. XP \$5. Teens Free. RB \$6. Suites avail. JHWNV
1 per Std. \$64-75; King L \$72-75
2 per Std. \$64-75; King L \$72-75



JOHNSTOWN-Gloversville

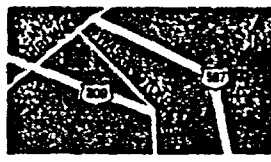
① SNOWSKIING • GOLF • TENNIS
618/782-4686 (S) FAX 618/782-4034
Location: Rt. 30-A. 308 N. Corrie Ave., Johnstown (12095-1005). 7 mi. to NY Thruway. Exit 28. Dwtn. 1 mi. Bus Terminal 1 mi. Amtrak 6 mi. Adirondack Vacationland. Shrine of North American Martyrs 7 mi. Saratoga Racetrack 28 mi. FMCC College 5 mi. Great Sacandaga Lake 7 mi. Leather Factory Outlets 2 mi. Features: Lounge, enter. (Fri & Sat). Game

Room. Mtps. to 300. No Pets in Rooms. Kennels. Rates: Tax 7%. XP \$5. Teens Free. RB \$5. JHTNY
1 per Std. \$47-53; King L \$50-56
2 per Std. \$55-61; King L \$58-64



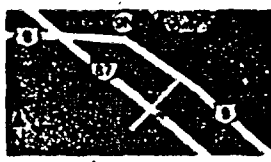
KINGSTON

① HOLIDOME-SNOWSKIING • ② SAUNA
914/338-0400 (S). FAX 914/338-0400
603 Washington Ave. at N.Y. St. Thruway (12401). Exit 16. Albany Airport 1 West Point 60 mi. Hunter Mtn. Skiing 27 mi. Catskill Mtn. 1 mi. EST. Features: Louie's Rest. Mirror Lounge. Live enter. Indoor Pool. Whirlpool. Game Area. King Leisure Rooms are Riverview or Inside Holidome. 212 rms. 2 Bns. Mtps. to 400. Rates: Tax 7%. XP \$6. Teens Free. RB \$5. KHTNY
1 per Std. \$54-65; King L \$63
2 per Std. \$68-76; King L \$76



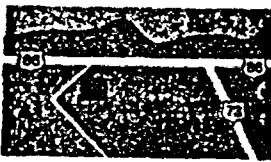
LAKE GEORGE

① SAUNA • ② SHOWTIME • RESORT
618/668-6781 (S). FAX 618/668-6213
Location: Rt. 9. Canada St. Box 231 (12845). I-87 Exit 21. Snowkilling 6 mi. Golf 6 mi. Shopping Mall 10 mi. A.C. Bicycle & Jogging Trails. Features: LR's Rest. & Lounge. Dinner Theatre (seasonal). Coffee Shop. Indoor/Outdoor Pools. Game Room. ESPN. In-Room Movies. Cable TV. Mtps. to 200. Off-Season Pkgs. avail. No Pets. Rates: Tax 7%. XP \$10. Teens Free. RB \$6. Sg. Event: 12/29-31, 1/12-14, 1/26-27, 2/2-3, 2/9-11, 2/16-18, 2/23-24, 5/24-27. Deposit: yr. round. LGRNY
1 per Std. \$63-85; King L \$65-88
2 per Std. \$63-85; King L \$68-98



LAKE PLACID-Grandview

① ICE SKATING • GOLF • SNOWSKIING
618/523-2556 ② TENNIS
Location: 1 Olympic Dr. (12946). Overlooking lake. Adj. Conv. Hall & Arena. Whiteface Mtn. 6 mi. Features: Crispy's Night Club. Complete Tennis Complex. Health Club. Indoor Pool. Sauna. Whirlpool. Private fishing. Racquetball Court. Mtps. to 600. Rates: Tax 7%. XP \$10. RB \$10. Suites avail. Deposit: yr. round. LKPNY
1 per Std. \$32-182; King L \$72-182
2 per Std. \$35-186; King L \$76-186



LATHAM— See ALBANY
LONG ISLAND— See Page 86
MANHATTAN— See NEW YORK CITY